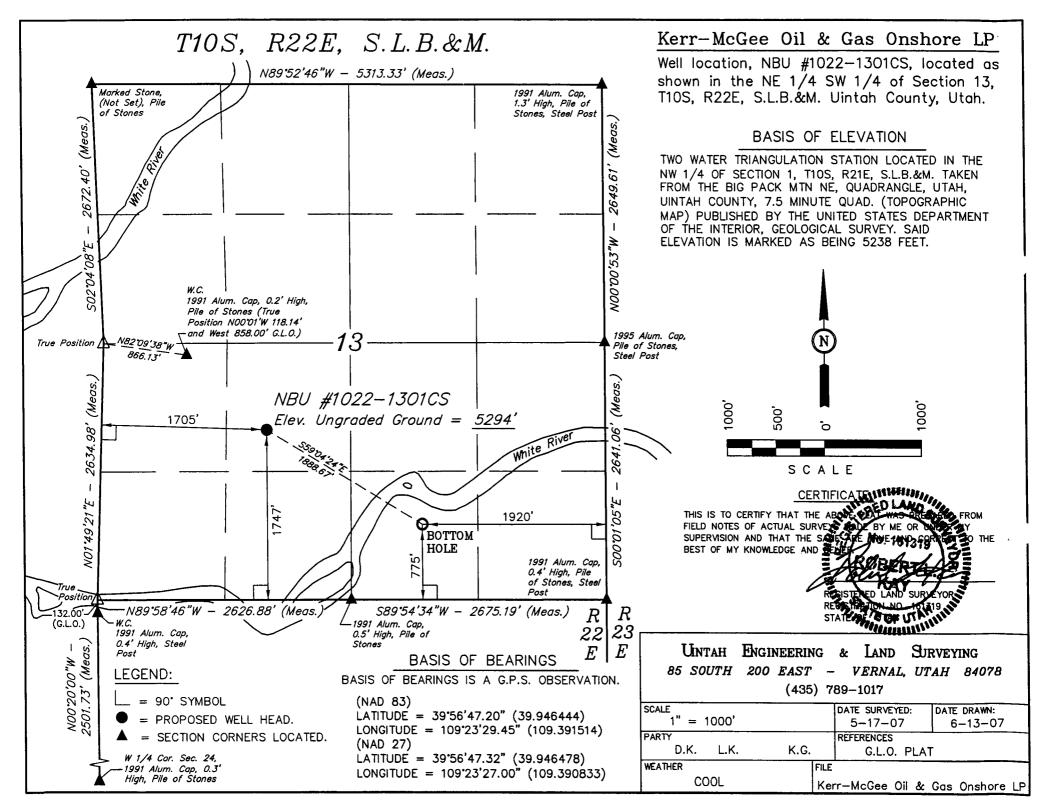
# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

AMENDED REPORT	
(highlight changes)	

		APPLICATI	ON FOR P	ERMIT TO	DRILL			5. MINERAL LEASE NO: STUO-08512-ST	6. SURFACE: State
1A. TYPE OF WO	PRK: [	ORILL 🔽 R	EENTER	DEEPEN				7. IF INDIAN, ALLOTTEE OR	TRIBE NAME:
B. TYPE OF WE	LL: OIL	GAS 🗹 O	THER	SIN	GLE ZONE [	MULTIPLE ZON	IE 🔽	8. UNIT OF CA AGREEMENT N UNIT #891008900	
2. NAME OF OPE		GAS ONSHO	RE L.P.					9. WELL NAME and NUMBER NBU 1022-13010	
3. ADDRESS OF 1368 S 120		VERNA	L STATE	UT 84	078	PHONE NUMBER: (435) 781-7024		10. FIELD AND POOL, OR WI	
		GES) 637462	X 44228	454 39	94646	6 -109.39094	48	11. QTR/QTR, SECTION, TOV MERIDIAN:	
AT SURFACE:	1747'FSL	, 1705'FWL						NESW 13 105	3 22E
AT PROPOSED	PRODUCING ZO	one: 775'FSL,	1920'FEL Si	25E3818	-104.3	850451			
14. DISTANCE IN	MILES AND DIR	ECTION FROM NEARE	ST TOWN OR POST	OFFICE:				12. COUNTY:	13. STATE: UTAH
		OF OURAY,		46 NUMPER O	F ACRES IN LEAS	SE.	I 17 N	UINTAH UMBER OF ACRES ASSIGNED	TO THIS WELL:
15. DISTANCE 10	NEAREST PRO	PERTY OR LEASE LIN	E (FEET)	16. NUMBER O	F ACRES IN LEAS	600.00	17. N	UMBER OF ACRES ASSIGNED	TO THIS WELL.
18, DISTANCE TO	O NEAREST WEL	LL (DRILLING, COMPLE	TED, OR	19. PROPOSED	DEPTH:		20. B	OND DESCRIPTION:	
REFER TO	Ó TOPO C	;				8,130	B	D0000237 220	13541
21. ELEVATIONS 5292'GL	(SHOW WHETH	IER DF, RT, GR, ETC.):		22. APPROXIM	ATE DATE WORK	( WILL START:	23. E	STIMATED DURATION:	
5292 GL									
24.			PROPOSE	D CASING A	ND CEMEN	TING PROGRAM			
SIZE OF HOLE	CASING SIZE	, GRADE, AND WEIGH	T PER FOOT S	SETTING DEPTH				YIELD, AND SLURRY WEIGHT	
12 1/4"	9 5/8	32.3#	H-40	2,100				/IELD 15.6 PPG	
7 7/8"	4 1/2	11.6#	I-80	8,130	1310 SX 5	50/50 POZ 1	1.31 \ 	/IELD 14.3 PPG	i
							•		
				****					
							<del></del>	·	
25.				ATTA	CHMENTS				
VERIFY THE FOL	LOWING ARE A	TTACHED IN ACCORD	ANCE WITH THE UT	AH OIL AND GAS C	ONSERVATION	GENERAL RULES:			
<b>✓</b> WELL PL	AT OR MAD DRE	PARED BY LICENSED	SURVEYOR OR EN	GINEER	☑ co	MPLETE DRILLING PLAN			
		OF WATER RIGHTS AF					ERSON (	OR COMPANY OTHER THAN TH	E LEASE OWNER
Y EVIDENCE	201 211101011	o							
		·							
NAME (PLEASE	PRINT) SHE	LA UPCHEGO	7	01	TITLE	SENIOR LAN	D AD	MIN SPECIALIST	
SIGNATURE	////	Ulled	111111		DATE	7/31/2007			
(This space for Sta	te use only)					•			
			L	Appro	wed by t	ne of		RECEIV	ED
401 1417 1000 10	2	13-047-3	4476	Utan Oil. Ge	Division s and Mi	nin <b>g</b>		AUG 0 6 2	
API NUMBER AS	SIGNED:				AFFRUVAL			1	
(11/2001)			1	Dates Kali	on DU-	F.9		DIV. OF OIL, GAS	& MINING

(11/2001)



### NBU 1022-1301CS NE/SW SEC. 13, T10S, R22E UINTAH COUNTY, UTAH UTSTUO-08512-ST

### ONSHORE ORDER NO. 1

### DRILLING PROGRAM

### 1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	921'
Top of Birds Nest Water	1237'
Mahogany	1602'
Wasatch	3963'
Mesaverde	6186'
MVU2	7018'
MVL1	7586'
TD	8130'

### 2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Substance	<u>Formation</u>	Depth
Water	Green River Top of Birds Nest Water	921' 1237'
Water	Mahogany	1602
Gas	Wasatch	3963'
Gas	Mesaverde	6186'
Gas	MVU2	7018'
Gas	MVL1	7586'
Water	N/A	
Other Minerals	N/A	

### 3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

### 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

### 5. <u>Drilling Fluids Program</u>:

Please refer to the attached Drilling Program.

The operator will use fresh water mud with 0-8% Bio Diesel.

### 6. Evaluation Program:

Please refer to the attached Drilling Program.

### 7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 8130' TD, approximately equals 5041 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3252 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

### 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

### 9. <u>Variances:</u>

Please refer to the attached Drilling Program.

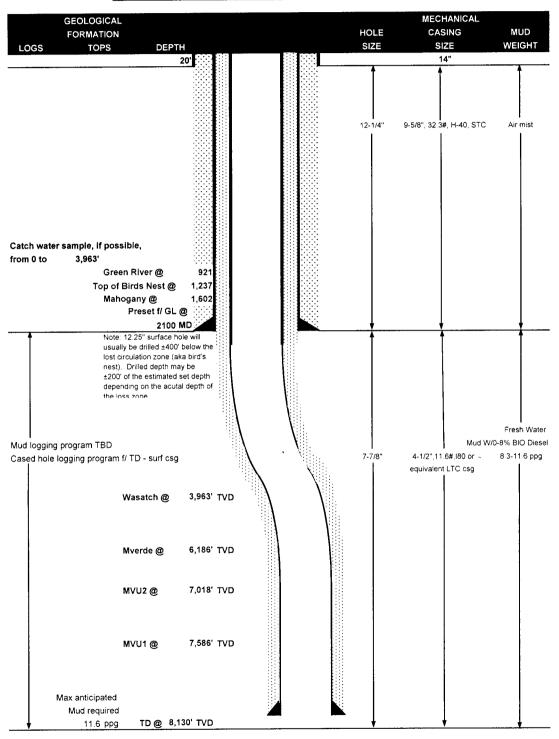
### 10. Other Information:

Please refer to the attached Drilling Program.



### KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

KERR-McGEE OIL & GAS ONSHORE LP August 1, 2007 COMPANY NAME 8,130' TVD TD WELL NAME **NBU 1022-1301CS** ELEVATION 5,293' GL KB 5,308' STATE Utah FIELD Natural Buttes COUNTY Uintah NE/SW SEC. 13, T10S, R22E 1747'FSL, 1705'FWL SURFACE LOCATION 39.946444 Longitude: 109.391514 Latitude: NE/SW/SE SEC. 13, T10S, R22E 775'FSL, 1920'FEL BTM HOLE LOCATION OBJECTIVE ZONE(S) Wasatch/Mesaverde Regulatory Agencies: UDOGM (MINERALS AND SURFACE), BLM, Tri-County Health Dept. ADDITIONAL INFO





### KERR-McGEE OIL & GAS ONSHORE LP **DRILLING PROGRAM**

#### CASING PROGRAM

							L	DESIGN FACTO	ORS
	SIZE	IN	TERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"		0-40'			1			
							2270	1370	254000
SURFACE	9-5/8"	0	to 210	0 32.30	H-40	STC	0.73*****	1.39	4.28
							7780	6350	201000
PRODUCTION	4-1/2"	0	to 813	11.60	1-80	LTC	2.50	1.29	2.44

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)
- 2) MASP (Prod Casing) = Pore Pressure at TD (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD =

0.0 ppg)

.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP

3115 psi

Burst SF is low but csg is much stronger than formation at 2000'. EMW @ 2000' for 2270# is 21.8 ppg or 1.13 psi/ft

#### CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ .25 pps flocele				
TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
		+ 2% CaCl + .25 pps flocele				
TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE		NOTE: If well will circulate water to s	surface, op	tion 2 will b	e utilized	
Option 2 LEAD	1500	65/35 Poz + 6% GeI + 10 pps gilsonite	360	35%	12.60	1.81
		+.25 pps Flocele + 3% salt BWOW				
TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
		+ .25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCI	as req.		15.60	1.18
PRODUCTION LEAD	5,680'	Premium Lite II + 3% KCI + 0.25 pps	620	60%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	2,450'	50/50 Poz/G + 10% salt + 2% gel	690	60%	14.30	1.31
		+.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 15% excess if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

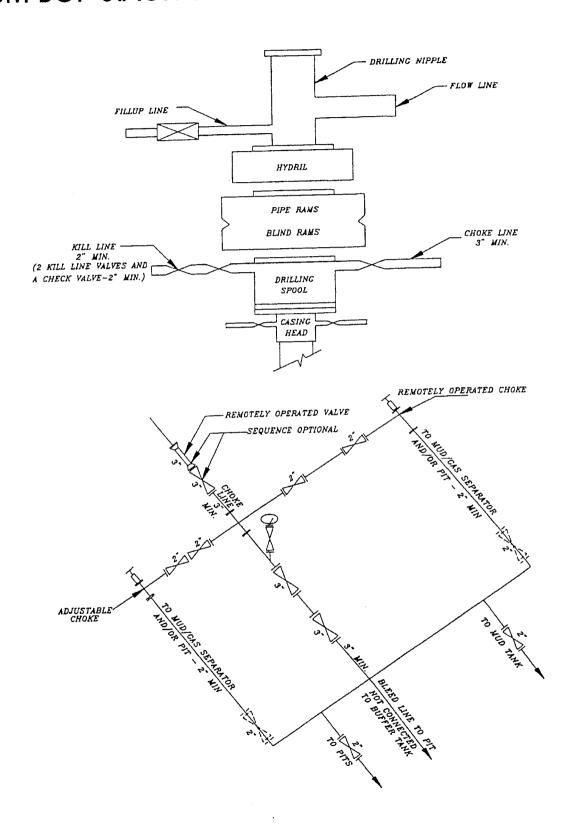
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

### ADDITIONAL INFORMATION

	BOPE: 11" 5M with one annula	ar and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out.	Record on chart recorder &
	tour sheet. Function test rams	on each trip. Maintain safety valve & inside BOP on rig floor at all times.	Kelly to be equipped with upper
	& lower kelly valves.		
	Drop Totco surveys every 2000	D'. Maximum allowable hole angle is 5 degrees.	
	Most rigs have PVT System for	mud monitoring. If no PVT is available, visual monitoring will be utilized.	
ILLING	ENGINEER:		DATE:
		Brad Laney	
			DATE:

Randy Bayne

# 5M BOP STACK and CHOKE MANIFOLD SYSTEM



### NBU 1022-13O1CS NE/SW SEC. 13, T10S, R22E Uintah County, UT UTSTUO-08512-ST

### ONSHORE ORDER NO. 1

### MULTI-POINT SURFACE USE & OPERATIONS PLAN

### 1. Existing Roads:

Refer to Topo Map A for directions to the location.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Refer to Topo Maps A and B for location of access roads within a 2 mile radius.

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

### 2. Planned Access Roads:

The operator will utilize an existing access road. Refer to Topo Map B for the location of the existing access road.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

### 3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

### 4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain

fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Carlsbad Canyon, standard color number 2.5Y 6/2.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

A 30' rights of way will be required for approximately 12,184' +/- of 6'' steel pipeline is proposed. The pipeline shall run from the location into Section 18, T10S, R23E (Lease #UTU-38421) and travel north into Sec. 7, T10S, R23E (Lease #UTU-49226) to tie-in to and existing pipeline. Refer to the attached Topo Map D for pipeline placement.

A 30' rights of way will be required for approximately 12,184' +/- of 10" steel pipeline is proposed. The pipeline shall run from the location into Section 18, T10S, R23E (Lease #UTU-38421) and travel north into Sec. 7, T10S, R23E (Lease #UTU-49226) to tie-in to and existing pipeline. Refer to the attached Topo Map D for pipeline placement.

### 5. <u>Location and Type of Water Supply:</u>

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32, T4S, R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

### 6. Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

### 7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

Due to difficult topography and proximity to the White River, the reserve pit will be constructed utilizing a double liner and felt. The liner will be approximately 60 mil in thickness versus our standard 20 mil and the reserve pit will also have a leak detection system installed between the liners.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S, R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E.

### 8. Ancillary Facilities:

None are anticipated.

### 9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be resurveyed and a Form 9 shall be submitted.

### 10. Plans for Reclamation of the Surface:

Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water (s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

### 11. Surface Ownership:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

### 12. Other Information:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey will be submitted when report becomes available.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within the boundaries of the Unit.

### 13. Lessee's or Operators's Representative & Certification:

Sheila Upchego Senior Land Admin Specialist Kerr-McGee Oil & Gas Onshore LP 1368 South 1200 East. Vernal, UT 84078 (435) 781-7024 Randy Bayne Drilling Manager Kerr-McGee Oil & Gas Onshore LP 1368 South 1200 East Vernal, UT 84078 (435)781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

7/31/2007 Date

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond #RLB0005237.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.



# **Weatherford**\*

# **Drilling Services**

# **Proposal**



### **ANADARKO - KERR McGEE**

NBU#1022-1301CS

**UINTAH COUNTY, UTAH** 

WELL FILE: PLAN 1

**DATE: JULY 12, 2007** 

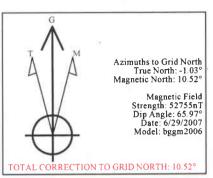
### Weatherford International, Ltd.

15710 John F. Kennedy Blvd Houston, Texas 77032 USA +1.281.260.1300 Main +1.281.260.4730 Fax www.weatherford.com



### KERR MCGEE OIL & GAS NBU #1022-1301CS UINTAH COUNTY, UTAH





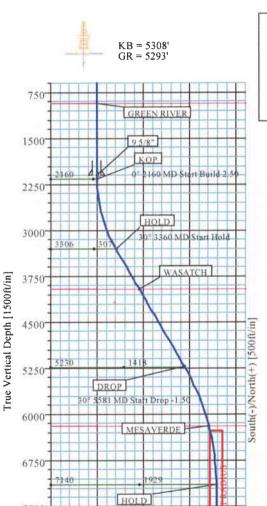
					SECTION DE	TAILS				
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	118.79	0.00	0 00	0 00	0.00	0.00	0.00	
2	2160 00	0.00	118 79	2160.00	0.00	0.00	0.00	0.00	0.00	
3	3360 00	30.00	118.79	3305 92	-147.88	269 09	2.50	118.79	307.05	
4	5581 38	30 00	118.79	5229 69	-682 80	1242 48	0.00	0 00	1417.74	
5	7581 38	0.00	118.79	7139.55	-929 26	1690.97	1.50	180.00	1929.48	
6	8571.83	0.00	118.79	8130 00	-929.26	1690 97	0.00	0.00	1929 48	PBHL

			WEL	L DETAILS			
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Well#13O1CS	0.00	0.00	14510600.00	2091358 20	39°56'47,113N	109°23'28_047W	N/A

TARGET DETAILS

Name TVD +N/-S +E/-W Northing Easting Shape

PBHL 8130 00 -929 26 1690 97 14509670 74 2093049 17 Circle (Radius 100)



7581 MD Start Hold

750

Vertical Section at 118.79° [1500ft/in]

PBHL

8572 MD D

1500

2250

7500

8250

-750

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)

Geodetic System: Universal Transverse Mercator (USfeet)
Ellipsoid: NAD27 (Clarke 1866)
Zone: UTM Zone 12, North 114W to 108W

Magnetic Model: bggm2006

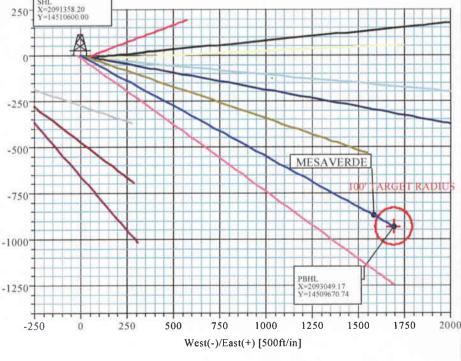
FIELD DETAILS

System Datum: Mean Sea Level Local North: Grid North

CASING DETAILS

No. TVD MD Name Size

1 2100 00 2100 00 9 5/8" 9 62



Plan: Plan #1 (Well #1301CS/1)

Created By: R JOYNER Date: 7/12/2007



Company: Field:

Anadarko-Kerr-McGee

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)

NBU 1022-1301CS Reference Site:

Reference Well: Reference Wellpath: 1

Well #1301CS

Date: 7/13/2007

Time: 08:47:56

Co-ordinate(NE) Reference: Vertical (TVD) Reference:

Site: NBU 1022-13O1CS, Grid North SITE 5308.0

Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria

Interpolation Method: MD Depth Range:

Interval: 0.00 to

8571.83 ft

Reference:

Error Model: Scan Method: Plan: Plan #1 ISCWSA Ellipse Closest Approach 3D

Separation

Error Surface:

Ellipse

Principal: Yes

Maximum Radius: 10000.00 ft Plan #1

Date Composed:

Version:

Tied-to:

Reference

MD

ft

6/29/2007

From Surface

Summary

------ Offset Wellpath -------Site Wellpath

Offset Ctr-Ctr Edge MD Distance Distance Factor ft ft ft

Warning

NBU #1022-13O4S NBU 1022-13O4S

1 V0 Plan: Plan #3 V1

2300.00 2300.84 20.24

10.85 2.16

Site: Well:

NBU #1022-13O4S NBU 1022-13O4S Wellpath: 1 V0 Plan: Plan #3 V1

Inter-Site Error:

0.00

ft

Reference MD ft         Offset ft         Semi-Major Axis ft         Offset Doffset ft         Ctr-Ctr ft         Edge ft         Separation Separation ft         Warning ft           0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         100.00         100.00         100.00         100.00         100.00         100.00         100.00         100.00         100.00         100.00         0.00         0.00         277.75         2.60         -19.10         19.28         19.10         108.28           200.00         200.00         200.00         200.00         0.30         0.30         277.75         2.60         -19.10         19.28         19.10         108.28           300.00         300.00         300.00         300.00         0.51         0.51         277.75         2.60         -19.10         19.28         18.68         32.29           300.00         300.00         300.00         0.51         0.51         277.75         2.60         -19.10         19.28         18.26         18.98           400.00         400.00         400.00         0.72         0.72         277.75         2.60         -19.10         19.28         17.84         13.44 <tr< th=""><th></th></tr<>	
MD ft         TVD ft         MD ft         TVD ft         Ref ft         Offset ft         TFO-HS deg         North ft         East ft         Distance ft         Distance ft         Factor ft         Warning ft           0.00         0.00         0.00         0.00         0.00         0.00         277.75         2.60         -19.10         19.28         No Data           100.00         100.00         100.00         0.09         0.09         277.75         2.60         -19.10         19.28         19.10         108.28           200.00         200.00         200.00         200.00         0.30         0.30         277.75         2.60         -19.10         19.28         19.10         108.28           300.00         300.00         300.00         300.00         0.51         0.51         277.75         2.60         -19.10         19.28         18.26         18.98           400.00         400.00         400.00         0.72         0.72         277.75         2.60         -19.10         19.28         17.84         13.44           500.00         500.00         500.00         0.93         0.93         277.75         2.60         -19.10         19.28         17.42         10.40	
ft         ft<	
100.00       100.00       100.00       100.00       0.09       0.09       277.75       2.60       -19.10       19.28       19.10       108.28         200.00       200.00       200.00       200.00       0.30       0.30       277.75       2.60       -19.10       19.28       18.68       32.29         300.00       300.00       300.00       300.00       0.51       0.51       277.75       2.60       -19.10       19.28       18.26       18.98         400.00       400.00       400.00       0.72       0.72       277.75       2.60       -19.10       19.28       17.84       13.44         500.00       500.00       500.00       500.00       0.93       0.93       277.75       2.60       -19.10       19.28       17.42       10.40         600.00       600.00       600.00       600.00       600.00       1.14       1.14       277.75       2.60       -19.10       19.28       17.00       8.48         700.00       700.00       700.00       700.00       1.35       1.35       277.75       2.60       -19.10       19.28       16.58       7.16	
100.00       100.00       100.00       100.00       0.09       0.09       277.75       2.60       -19.10       19.28       19.10       108.28         200.00       200.00       200.00       200.00       0.30       0.30       277.75       2.60       -19.10       19.28       18.68       32.29         300.00       300.00       300.00       300.00       0.51       0.51       277.75       2.60       -19.10       19.28       18.26       18.98         400.00       400.00       400.00       0.72       0.72       277.75       2.60       -19.10       19.28       17.84       13.44         500.00       500.00       500.00       500.00       0.93       0.93       277.75       2.60       -19.10       19.28       17.42       10.40         600.00       600.00       600.00       600.00       600.00       1.14       1.14       277.75       2.60       -19.10       19.28       17.00       8.48         700.00       700.00       700.00       700.00       1.35       1.35       277.75       2.60       -19.10       19.28       16.58       7.16	- 1
200.00 200.00 200.00 200.00 0.30 0.30 277.75 2.60 -19.10 19.28 18.68 32.29 300.00 300.00 300.00 300.00 0.51 0.51 277.75 2.60 -19.10 19.28 18.26 18.98 400.00 400.00 400.00 400.00 0.72 0.72 277.75 2.60 -19.10 19.28 17.84 13.44    500.00 500.00 500.00 500.00 500.00 0.93 0.93 277.75 2.60 -19.10 19.28 17.42 10.40 600.00 600.00 600.00 600.00 1.14 1.14 277.75 2.60 -19.10 19.28 17.00 8.48 700.00 700.00 700.00 700.00 1.35 1.35 277.75 2.60 -19.10 19.28 16.58 7.16	+
300.00       300.00       300.00       300.00       0.51       0.51       277.75       2.60       -19.10       19.28       18.26       18.98         400.00       400.00       400.00       0.72       0.72       277.75       2.60       -19.10       19.28       17.84       13.44         500.00       500.00       500.00       500.00       0.93       0.93       277.75       2.60       -19.10       19.28       17.42       10.40         600.00       600.00       600.00       600.00       1.14       1.14       277.75       2.60       -19.10       19.28       17.00       8.48         700.00       700.00       700.00       700.00       1.35       1.35       277.75       2.60       -19.10       19.28       16.58       7.16	
400.00       400.00       400.00       400.00       0.72       0.72       277.75       2.60       -19.10       19.28       17.84       13.44         500.00       500.00       500.00       500.00       0.93       277.75       2.60       -19.10       19.28       17.42       10.40         600.00       600.00       600.00       600.00       1.14       1.14       277.75       2.60       -19.10       19.28       17.00       8.48         700.00       700.00       700.00       700.00       1.35       1.35       277.75       2.60       -19.10       19.28       16.58       7.16	
500.00       500.00       500.00       500.00       0.93       0.93       277.75       2.60       -19.10       19.28       17.42       10.40         600.00       600.00       600.00       600.00       1.14       1.14       277.75       2.60       -19.10       19.28       17.00       8.48         700.00       700.00       700.00       700.00       1.35       1.35       277.75       2.60       -19.10       19.28       16.58       7.16	
600.00 600.00 600.00 600.00 1.14 1.14 277.75 2.60 -19.10 19.28 17.00 8.48 700.00 700.00 700.00 700.00 1.35 1.35 277.75 2.60 -19.10 19.28 16.58 7.16	ļ
600.00 600.00 600.00 600.00 1.14 1.14 277.75 2.60 -19.10 19.28 17.00 8.48 700.00 700.00 700.00 700.00 1.35 1.35 277.75 2.60 -19.10 19.28 16.58 7.16	1
700.00 700.00 700.00 700.00 1.35 1.35 277.75 2.60 -19.10 19.28 16.58 7.16	1
800.00 800.00 800.00 800.00 1.56 1.56 277.75 2.60 -19.10 19.28 16.17 6.20	
900.00 900.00 900.00 900.00 1.76 1.76 277.75 2.60 -19.10 19.28 15.75 5.46	
1000.00 1000.00 1000.00 1000.00 1.97 1.97 277.75 2.60 -19.10 19.28 15.33 4.88	
1100.00 1100.00 1100.00 1100.00 2.18 2.18 277.75 2.60 -19.10 19.28 14.91 4.41	
1200.00 1200.00 1200.00 1200.00 2.39 2.39 277.75 2.60 -19.10 19.28 14.49 4.03	
1300.00 1300.00 1300.00 1300.00 2.60 2.60 277.75 2.60 -19.10 19.28 14.07 3.70	
1400.00 1400.00 1400.00 1400.00 2.81 2.81 277.75 2.60 -19.10 19.28 13.65 3.43	
1500.00 1500.00 1500.00 1500.00 3.02 3.02 277.75 2.60 -19.10 19.28 13.23 3.19	
1000:00 1000:00 1000:00 1000:00	,
1700:00 1700:00 1700:00 1700:00	
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1900.00 1900.00 1900.00 1900.00 3.86 3.86 277.75 2.60 -19.10 19.28 11.56 2.50	
2000.00 2000.00 2000.00 2000.00 4.07 4.07 277.75 2.60 -19.10 19.28 11.14 2.37	
2100.00 2100.00 2100.00 2100.00 4.28 4.28 277.75 2.60 -19.10 19.28 10.72 2.25	
2200.00 2200.00 2200.24 2200.24 4.49 4.49 158.94 2.43 -18.87 19.35 10.38 2.16	
2300.00 2299.91 2300.84 2300.79 4.70 4.70 158.68 0.56 -16.30 20.24 10.85 2.16	
2400.00 2399.56 2401.47 2401.19 4.91 4.91 158.19 -3.39 -10.88 22.10 12.32 2.26	
255555 25555	
2500.00 2498.75 2502.15 2501.34 5.14 5.13 157.59 -9.42 -2.60 24.95 14.77 2.45	
2600.00 2597.30 2602.89 2601.13 5.38 5.37 156.96 -17.52 8.52 28.78 18.20 2.72	
2700.00 2695.02 2703.72 2700.46 5.66 5.62 156.37 -27.69 22.48 33.58 22.60 3.06	
2800.00 2791.71 2804.65 2799.22 5.98 5.91 155.84 -39.93 39.28 39.35 27.97 3.46	}
2900.00 2887.21 2905.71 2897.31 6.36 6.23 155.39 -54.22 58.91 46.10 34.27 3.90	
3000.00 2981.32 3006.91 2994.62 6.80 6.60 154.99 -70.57 81.35 53.80 41.51 4.38	
3100.00 3073.87 3108.27 3091.05 7.33 7.03 154.65 -88.97 106.60 62.45 49.65 4.88	
3200.00 3164.67 3209.82 3186.48 7.94 7.52 154.35 -109.40 134.65 72.05 58.69 5.39	
3300.00 3253.57 3311.58 3280.82 8.64 8.08 154.09 -131.85 165.48 82.57 68.59 5.90	
3400.00 3340.56 3413.61 3373.98 9.44 8.71 153.82 -156.33 199.09 93.71 78.98 6.36	
3500.00 3427.16 3516.14 3466.06 10.29 9.43 152.74 -182.89 235.54 102.57 86.91 6.55	
3500.00 3427.16 3516.14 3466.06 10.29 9.43 152.74 -182.89 235.54 102.57 86.91 6.55	j



Company: Field:

Anadarko-Kerr-McGee Date
UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)
NBU 1022-13O1CS Co-e

Reference Site: Well #1301CS

Reference Well: Reference Wellpath: 1

7/13/2007 Date:

Time: 08:47:56

Site: NBU 1022-13O1CS, Grid North

Co-ordinate(NE) Reference: SITE 5308.0 Vertical (TVD) Reference:

Db: Sybase

Site: Well: NBU #1022-13O4S NBU 1022-13O4S

weii: Wellpath:	1 V0 Plan	: Plan #3 V	1						Inter-Site	e Error:	0.00	ft
Refe MD ft	rence TVD ft	Of MD ft	fset TVD ft	Semi-M Ref ft	lajor Axis Offset ft	TFO-HS	Offset North ft	Location East ft			Separation Factor	Warning
						150.74		274.77	108.53	91.72	6.45	
3600.00	3513.76	3619.02	3556.76	11.17	10.22	100.74	241.07	315.41	112.29	94.12	6.18	
3700.00	3600.36	3720.08	3644.43	12.08		148.06		355.74	116.06	96.35	5.89	
3800.00	3686.97	3819.88	3730.86	13.00		145.50			120.05	98.70	5.62	
3900.00	3773.57	3919.68	3817.28	13.94	12.85	143.11	-299.83	396.08	120.05	96.70	5.02	
4000.00	3860.17	4019.48	3903.71	14.89	13.76	140.87	-329.21	436.41	124.23		5.38	
4100.00	3946.77	4119.28	3990.14	15.86		138.78		476.74	128.59		5.17	
4200.00	4033.38	4219.07	4076.57	16.83		136.83		517.08	133.11		4.98	
4300.00	4119.98	4318.87	4163.00	17.81		135.01		557.41	137.78		4.81	
4400.00	4206.58	4418.67	4249.42	18.79	17.55	133.30	-446.73	597.74	142.57	111.95	4.66	
4500.00	4293.18	4518.47	4335.85	19.78	18.52	131.72	-476.11	638.07	147.48	114.87	4.52	
4600.00	4379.79	4618.27	4422.28	20.78	19.49	130.23	-505.49	678.41	152.50	117.86	4.40	
4700.00	4466.39	4718.07	4508.71	21.77	20.47	128.84	-534.87	718.74	157.61	120.93	4.30	
4800.00		4817.87	4595.14	22.77	21.45	127.54	-564.25	759.07	162.81	124.07	4.20	
4900.00	4639.59	4917.66	4681.56	23.78		126.32		799.41	168.09		4.12	
E000 00	4706.00	E017 46	4767.00	24.70	23.43	125.17	-623 01	839.74	173.44	130 54	4.04	
5000.00	4726.20	5017.46	4767.99	24.79		125.17		880.07	173.44		3.98	
5100.00	4812.80	5117.26	4854.42	25.80			-681.77	920.40	184.33		3.91	
5200.00	4899.40	5217.06	4940.85	26.81				920.40	189.86		3.86	
5300.00	4986.00	5316.86	5027.28	27.82		122.13	-711.15 -740.53		195.44		3.81	
5400.00	5072.61	5416.66	5113.70	28.83	21.41	141.44	-140.03	1001.07	199.44	177.13	9.01	
5500.00	5159.21	5516.45	5200.13	29.85	28.41	120.37	-769.91	1041.40	201.06	147.64	3.76	
5600.00	5245.84	5616.25	5286.56	30.84	29.42	119.57	-799.29	1081.74	206.70		3.72	
5700.00	5333.32	5716.04	5372.98	31.52			-828.67		211.55		3.68	
5800.00	5422.04	5815.75	5459.33	32.18				1162.36	215.29		3.61	
5900.00	5511.94	5915.33	5545.56	32.81			-887.33		218.14		3.53	
0000 00	ECO2 06	6014.60	5631.62	33.40	22.42	111 66	016 50	1242.76	220.35	156 19	3.43	
6000.00	5602.96	6014.69	5717.34	33.95				1282.76	222.27		3.34	
6100.00 6200.00	5695.02 5788.08	6113.67 6211.66	5802.94	34.47	35.72	104 74	-973.80	1321 31	224.53		3.27	
6300.00	5882.07		5890.04	34.47				1358.20	227.36		3.24	
6400.00	5976.91	6408.71	5978.62	35.40	36.46		1026.31		230.72		3.22	
											2.20	•
6500.00	6072.55	6507.78		35.80	37.04			1426.85	234.59		3.22	
6600.00	6168.93	6607.21	6160.02	36.17	37.58			1458.52	238.91		3.25	
6700.00	6265.97		6252.74	36.49	38.10			1488.36	243.65		3.28	
00.0086	6363.60	6807.20	6346.75	36.78	38.57			1516.33	248.76		3.33	
6900.00	6461.77	6907.75	6441.99	37.02	39.01	82.65 -	1134.85	1542.39	254.22	1/9.43	3.40	
7000.00	6560.41	7008.68	6538.40	37.22	39.42	79.92 -	1152.42	1566.51	259.96	185.23	3.48	
7100.00	6659.44	7109.99	6635.94	37.39	39.78			1588.64	265.97		3.57	
7200.00	6758.80	7211.68	6734.54	37.51	40.11	74.78 -	1183.17	1608.74	272.21		3.68	
7300.00	6858.42	7313.75	6834.14	37.60	40.40			1626.77	278.63		3.79	
7400.00	6958.23		6934.68	37.64	40.64	70.02 -	1207.92	1642.70	285.21	212.53	3.92	
7500.00	7058.17	7519.04	7036.08	37.65	40.85	67 78 -	1217.97	1656 50	291.92	220 14	4.07	
7600.00	7158.17	7622.27	7138.30	37.63			1226.43		298.71		5.96	
7700.00	7158.17	7726.08	7241.45	37.67				1677.55	304.80		6.14	
7800.00	7358.17	7830.45	7345.44	37.71				1684.75	309.61		6.29	
7900.00	7458.17	7935.24	7450.05	37.76			1242.12		312.97		6.38	
		0040.00	7555.00	27.00	44.00	170 77	1044.04	1602.25	214 77	265 90	6.42	
8000.00	7558.17	8040.28	7555.03	37.80				1692.25	314.77		6.43	
8100.00	7658.17	8143.41	7658.17	37.85			1244.33		315.07 315.07		10.49 10.43	
8200.00	7758.17	8243.41	7758.17	37.90			1244.33		315.07		10.43	
8300.00 8400.00	7858.17 7958.17	8343.41 8443.41	7858.17 7958.17	37.94 37.99			1244.33	1692.69 1692.69	315.07		10.33	
S +00.00		5110.71										
8500.00	8058.17	8543.41	8058.17	38.04				1692.69	315.07		10.20	
8571.83	8130.00	8595.24	8110.00	38.08	41.42	1/9.69 -	1244.33	1692.69	315.71	284.66	10.17	



Company: Field:

Anadarko-Kerr-McGee

Date: UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)

Reference Site:

Well #1301CS Reference Well: Reference Wellpath: 1

NRU 1022-13O1CS

Time: 08:47:56

Page:

Co-ordinate(NE) Reference: Vertical (TVD) Reference:

7/13/2007

Site: NBU 1022-13O1CS, Grid North SITE 5308.0

NO GLOBAL SCAN: Using user defined selection & scan criteria

Interpolation Method: MD 0.00 to Interval:

8571.83 ft

Reference: Error Model: Scan Method: Plan: Plan #1 ISCWSA Ellipse

**Error Surface:** 

Closest Approach 3D Ellipse

Maximum Radius: 10000.00 ft Plan #1

Date Composed:

6/29/2007

Version:

Principal:

Depth Range:

Yes

Tied-to:

From Surface

Summary

<----- Offset Wellpath -----Wellpath Site Well

Reference Offset MD MD ft ft

Ctr-Ctr Edge Separation Distance Distance Factor ft ft

Warning

NBU #1022-13O4S NBU 1022-13O4S

1 V0 Plan: Plan #3 V1

2300.00 2300.84 20.24 10.85 2.16

Well:

NBU #1022-13O4S NBU 1022-13O4S 1 V0 Plan: Plan #3 V1

Inter-Site Error:

0.00

ft

Wellpath: Offset Location Ctr-Ctr Edge Separation Offset Semi-Major Axis Reference TVD TFO-HS Distance Distance Factor Warning MD TVD MD Ref Offset North East deg ft -19.10 19.28 No Data 0.00 0.00 277.75 0.00 0.000.00 0.002.60 -19.10 19.28 19.10 108.28 100.00 100.00 100.00 100.00 0.09 0.09 277.75 200.00 0.30 0.30 277.75 2.60 -19.1019 28 18 68 32.29 200.00 200.00 200.00 0.51 277.75 -19.10 19.28 18.26 18.98 300.00 0.51 2.60 300.00 300.00 300.00 2.60 -19.10 19.28 17.84 13.44 0.72 277.75 400.00 400.00 400.00 400.00 0.72 2.60 -19.10 19.28 17.42 10.40 500.00 500.00 500.00 0.93 0.93 277.75 500.00 600.00 -19.10 19.28 17.00 8.48 1.14 277.75 2.60 600.00 1.14 600.00 600.00 19.28 16.58 7.16 700.00 700.00 700.00 700.00 1.35 1.35 277.75 2.60 -19 10 6.20 800.00 1.56 1.56 277.75 2.60 -19.10 19.28 16.17 800.00 800.00 800.00 -19.10 19.28 15.75 5.46 900.00 900.00 1.76 1.76 277.75 2.60 900.00 900.00 -19.1019 28 15.33 4 88 1000.00 1000.00 1.97 1.97 277.75 2.60 1000.00 1000.00 277.75 2.60 -19.10 19.28 14.91 4.41 1100.00 1100.00 1100.00 2.18 2.18 1100.00 4.03 -19.10 19.28 14.49 1200.00 1200.00 1200.00 1200.00 2.39 2.39 277 75 2.60 14.07 2.60 -19 10 19 28 3.70 1300.00 1300.00 1300.00 2.60 2.60 277.75 1300.00 2.81 277.75 2.60 -19.10 19.28 13.65 3.43 1400.00 1400.00 1400.00 1400.00 2.81 19.28 3.19 1500.00 3.02 277.75 2 60 -191013.23 1500.00 1500.00 1500.00 3.02 2.98 1600.00 1600.00 1600.00 3.23 3.23 277.75 2.60 -19.1019.28 12.81 1600.00 -19.10 19.28 12.40 2.80 1700.00 1700.00 3.44 3.44 277.75 2.60 1700.00 1700.00 2.60 -19.10 19.28 11.98 2.64 1800.00 1800.00 3.65 3.65 277.75 1800.00 1800.00 11.56 2.50 1900.00 1900.00 1900.00 3.86 3.86 277.75 2.60 -19.1019.28 1900.00 19.28 2.37 4.07 277.75 2.60 -19.10 11.14 2000.00 2000.00 2000.00 4.07 2000.00 277.75 2.60 -19.10 19.28 10.72 2.25 2100.00 2100.00 2100.00 2100.00 4.28 4.28 2200.24 19.35 2.16 2200.24 4.49 4.49 158.94 2.43 -18.87 10.38 2200.00 2200.00 -16.30 20.24 10.85 2.16 2300.84 2300.79 4.70 4.70 158.68 0.56 2300.00 2299 91 4.91 158.19 -3.39-10.8822.10 12.32 2.26 2400.00 2399.56 2401.47 2401.19 4.91 2.45 157.59 -9.42 -2.6024 95 2500.00 2498.75 2502.15 2501.34 5.14 5.13 28.78 18.20 2.72 2597.30 2602.89 2601 13 5.38 5.37 156.96 -17.528.52 2600.00 5.62 156.37 -27 69 22.48 33.58 22.60 3.06 2700.00 2695.02 2703.72 2700.46 5.66 2799.22 5.91 155.84 -39.93 39.28 39.35 27 97 3 46 2800.00 2791.71 2804.65 5.98 2897.31 46.10 34.27 3.90 2887.21 2905.71 6.36 6.23 155.39 -54.2258.91 2900.00 4.38 -70.57 81.35 53.80 41.51 3006.91 2994.62 6.80 6.60 154.99 3000.00 2981.32 106.60 62.45 49.65 4.88 3100.00 3073.87 3108.27 3091.05 7.33 7.03 154.65 -88.975.39 7.94 7.52 154.35 -109.40 134.65 72.05 58.69 3186.48 3200.00 3164.67 3209.82 5.90 154.09 -131.85 165 48 82 57 68 59 3253.57 3311.58 3280.82 8.64 8.08 3300.00 153.82 -156.33199.09 93.71 78.98 6.36 3400.00 3340.56 3413.61 3373.98 9.44 9.43 152.74 -182.89 235.54 102.57 86.91 6.55 3466.06 10.29 3500.00 3427.16 3516.14



Company: Field:

Anadarko-Kerr-McGee Date
UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)
NBU 1022-1301CS Co-c
Well #1301CS Vert

Reference Site: Reference Well:

Reference Wellpath: 1

Date: 7/13/2007

Time: 08:47:56

Page:

Co-ordinate(NE) Reference: Vertical (TVD) Reference:

Site: NBU 1022-13O1CS, Grid North SITE 5308.0

Db: Sybase

NBU #1022-13O4S NBU 1022-13O4S

Well: Wellpath:	NBU 1022 1 V0 Plan	2-13O4S ): Plan #3 V	<b>′</b> 1						Inter-Sit	e Error:	0.00	ft
	rence		Tset	Semi-M	lajor Axis	}	Offset	Location			Separation	
MD	TVD	MD	TVD	Ref		TFO-HS		East			Factor	Warning
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3600.00	3513.76	3619.02	3556.76	11.17		150.74		274.77	108.53	91.72	6.45	
3700.00	3600.36	3720.08	3644.43	12.08		148.06		315.41	112.29	94.12	6.18 5.89	
3800.00	3686.97	3819.88	3730.86	13.00		145.50 143.11		355.74 396.08	116.06 120.05	96.35 98.70	5.62	
3900.00	3773.57	3919.68	3817.28	13.94	12.65	143.11	-299.03	390.00	120.03	30.70	3.02	
4000.00	3860.17	4019.48	3903.71	14.89	13.76	140.87	-329.21	436.41	124.23	101.15	5.38	
4100.00	3946.77	4119.28	3990.14	15.86		138.78		476.74	128.59		5.17	
4200.00	4033.38	4219.07	4076.57	16.83		136.83		517.08	133.11		4.98	
4300.00	4119.98	4318.87	4163.00	17.81		135.01		557.41 597.74	137.78 142.57		4.81 4.66	
4400.00	4206.58	4418.67	4249.42	18.79	17.55	133.30	<del>-44</del> 0.73	381.14	142.57	111.55	4.00	
4500.00	4293.18	4518.47	4335.85	19.78	18.52	131.72	-476.11	638.07	147.48	114.87	4.52	
4600.00	4379.79	4618.27	4422.28	20.78		130.23		678.41	152.50		4.40	
4700.00	4466.39	4718.07	4508.71	21.77		128.84		718.74	157.61		4.30	
4800.00	4552.99	4817.87	4595.14	22.77		127.54		759.07	162.81		4.20 4.12	
4900.00	4639.59	4917.66	4681.56	23.78	ZZ.4 <del>4</del>	126.32	-593.63	799.41	168.09	121.20	4.12	
5000.00	4726.20	5017.46	4767.99	24.79		125.17		839.74	173.44		4.04	
5100.00	4812.80	5117.26	4854.42	25.80		124.09		880.07	178.85		3.98	
5200.00	4899.40	5217.06	4940.85	26.81		123.08		920.40	184.33		3.91	
5300.00	4986.00	5316.86	5027.28	27.82		122.13		960.74	189.86	-	3.86 3.81	
5400.00	5072.61	5416.66	5113.70	28.83	27.41	121.22	-740.53	1001.07	195. <del>4</del> 4	144.13	3.01	
5500.00	5159.21	5516.45	5200.13	29.85	28.41	120.37	-769.91	1041.40	201.06	147.64	3.76	
5600.00	5245.84	5616.25	5286.56	30.84	29.42	119.57	-799.29	1081.74	206.70	151.19	3.72	
5700.00	5333.32	5716.04	5372.98	31.52	30.42	118.45	-828.67	1122.06	211.55		3.68	
5800.00	5422.04	5815.75	5459.33	32.18		116.75			215.29		3.61	
5900.00	5511.94	5915.33	5545.56	32.81	32.43	114.48	-887.33	1202.61	218.14	150.32	3.53	
6000.00	5602.96	6014.69	5631.62	33.40	33.43	111.66	-916.59	1242.76	220.35	156.19	3.43	
6100.00	5695.02	6113.67	5717.34	33.95		108.27			222.27	155.75	3.34	
6200.00	5788.08	6211.66	5802.94	34.47		104.74			224.53		3.27	
6300.00	5882.07	6310.01	5890.04	34.96		101.29 -			227.36		3.24	
6400.00	5976.91	6408.71	5978.62	35.40	36.46	97.92 -	1026.31	1393.40	230.72	159.11	3.22	
6500.00	6072.55	6507.78	6068.63	35.80	37.04	94.65 -	1050.68	1426.85	234.59	161.84	3.22	ì
6600.00	6168.93	6607.21	6160.02	36.17	37.58			1458.52	238.91		3.25	
6700.00	6265.97	6707.02	6252.74	36.49	38.10			1488.36	243.65		3.28	
6800.00	6363.60	6807.20	6346.75	36.78	38.57			1516.33	248.76		3.33	
6900.00	6461.77	6907.75	6441.99	37.02	39.01	82.65 -	1134.85	1542.39	254.22	179.43	3.40	
7000.00	6560.41	7008.68	6538.40	37.22	39.42	79.92 -	1152.42	1566.51	259.96	185.23	3.48	
7100.00	6659.44	7109.99	6635.94	37.39	39.78	77.30 -	1168.53	1588.64	265.97	191.49	3.57	
7200.00	6758.80	7211.68	6734.54	37.51	40.11	74.78 -	1183.17	1608.74	272.21		3.68	
7300.00	6858.42	7313.75	6834.14	37.60	40.40			1626.77	278.63		3.79	
7400.00	6958.23	7416.20	6934.68	37.64	40.64	70.02 -	1207.92	1642.70	285.21	Z 1Z.53	3.92	
7500.00	7058.17	7519.04	7036.08	37.65	40.85	67.78 -	1217.97	1656.50	291.92	220.14	4.07	
7600.00	7158.17	7622.27	7138.30	37.63		184.40 -			298.71	248.57	5.96	
7700.00	7258.17	7726.08	7241.45	37.67		182.53 -			304.80		6.14	
7800.00	7358.17	7830.45	7345.44	37.71		181.15 -			309.61		6.29	
7900.00	7458.17	7935.24	7450.05	37.76	41.26	180.24 -	1242.12	00.6001	312.97	203.92	6.38	
8000.00	7558.17	8040.28	7555.03	37.80	41.26	179.77 -	1244.01	1692.25	314.77	265.80	6.43	
8100.00	7658.17	8143.41	7658.17	37.85	41.24	179.69 -	1244.33	1692.69	315.07	285.04	10.49	
8200.00	7758.17	8243.41	7758.17	37.90	41.26	179.69 -	1244.33	1692.69	315.07		10.43	
8300.00	7858.17	8343.41	7858.17	37.94		179.69 -			315.07		10.35	
8400.00	7958.17	8443.41	7958.17	37.99	41.35	179.69 -	1244.33	1092.09	315.07	20 <del>4</del> .4 I	10.28	
8500.00	8058.17	8543.41	8058.17	38.04	41.40	179.69 -	1244.33	1692.69	315.07		10.20	
8571.83	8130.00	8595.24	8110.00	38.08		179.69 -			315.71		10.17	

# Kerr-McGee Oil & Gas Onshore LP

NBU #1022-13K-3T, #1022-13O4S, #1022-13O1CS, #1022-13O2S, #1022-13D4S, #1022-13I3S, #1022-13O1AS, #1022-13J4S, #1022-13I4S, #1022-13L4S, #1022-13L3S, #1022-13K3S, #1022-13M2AS, #1022-13N2S, #1022-13N1S, #1022-13M2CS & #1022-13M1S SECTION 13, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 3.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHWESTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 5.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND SOUTHERLY, SOUTHWESTERLY DIRECTION THEN PROCEED IN A APPROXIMATELY 1.9 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 58.7 MILES.

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-13K-3T, #1022-13O4S, #1022-13O1CS, #1022-13O2S, #1022-13K4S, #1022-13I3S, #1022-13O1AS, #1022-13J4S, #1022-13I4S, #1022-13L4S, #1022-13L3S, #1022-13K3S, #1022-13M2AS, #1022-13N2S, #1022-13N1S, #1022-13M2CS & #1022-13M1S

LOCATED IN UINTAH COUNTY, UTAH SECTION 13, T10S, R22E, S.L.B.&M.

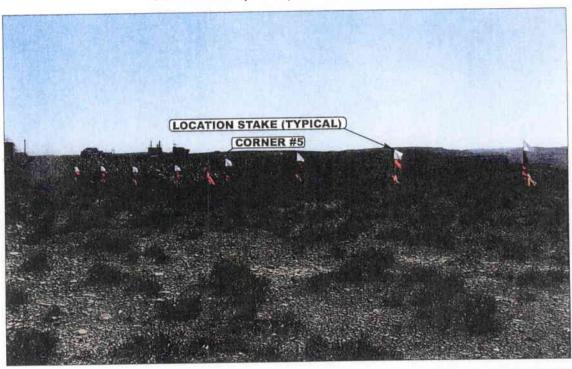


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES

CAMERA ANGLE: SOUTHERLY



PHOTO: VIEW OF EXISTING ACCESS

CAMERA ANGLE: WESTERLY



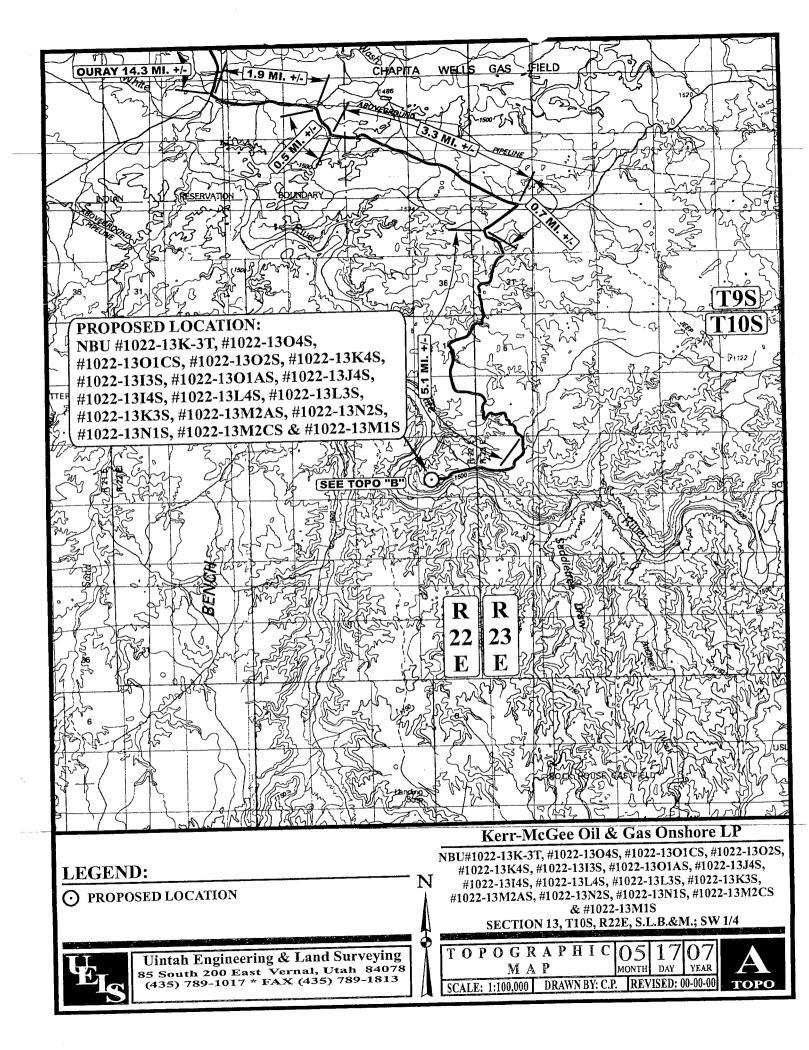
Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 435-789-1017 uels@uelsinc.com

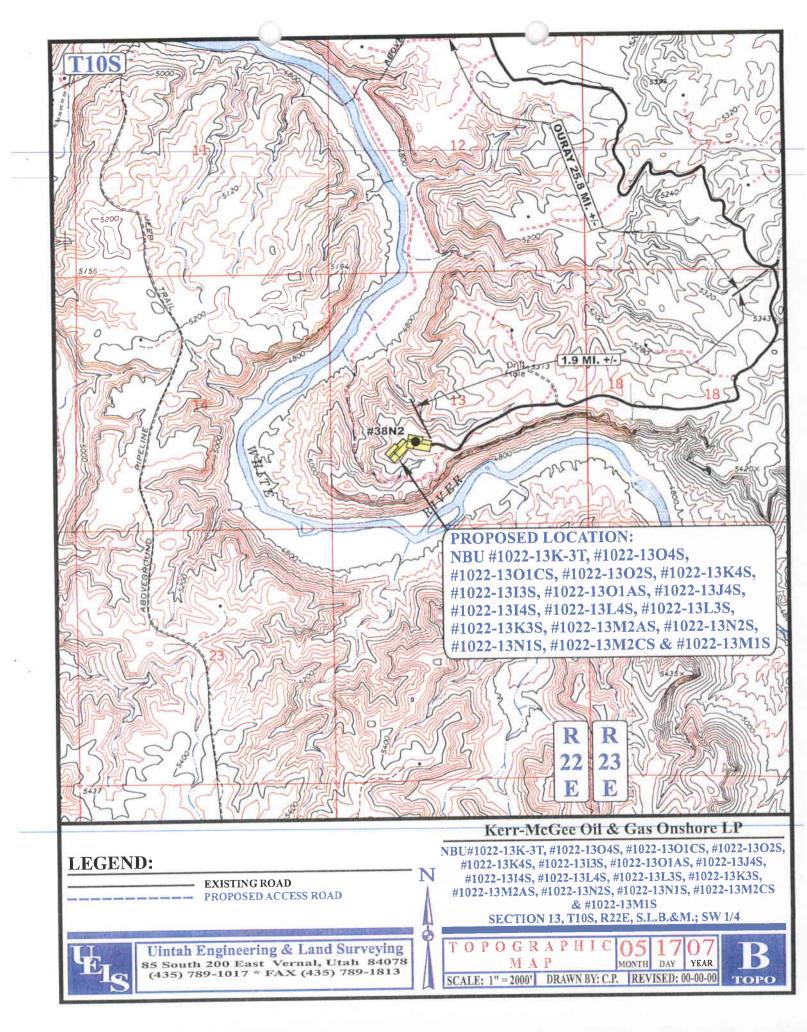
LOCATION PHOTOS

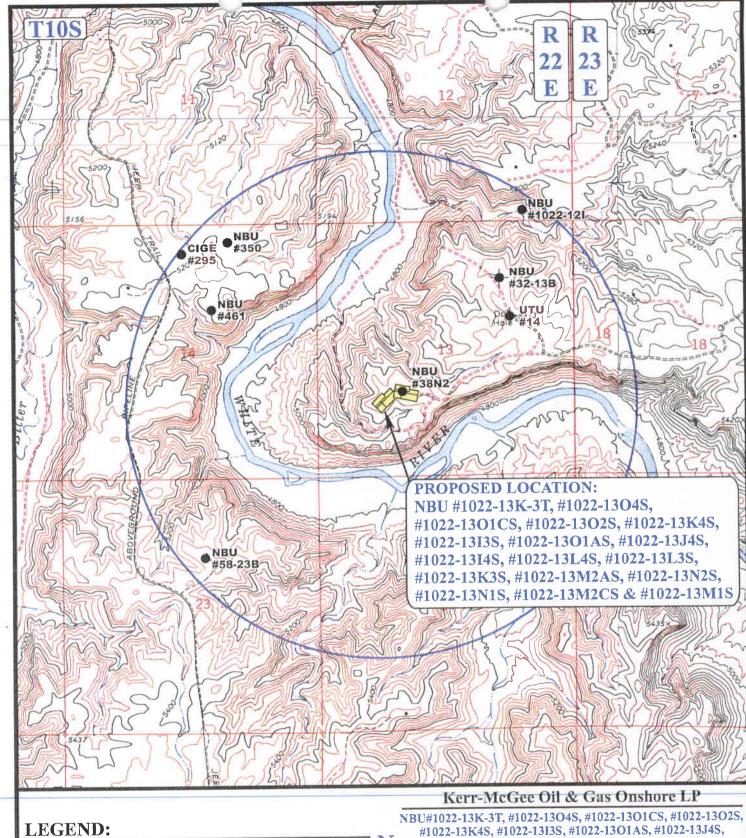
REVISED: 00-00-00

РНОТО

TAKEN BY: L.K. | DRAWN BY: C.P.







- Ø DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

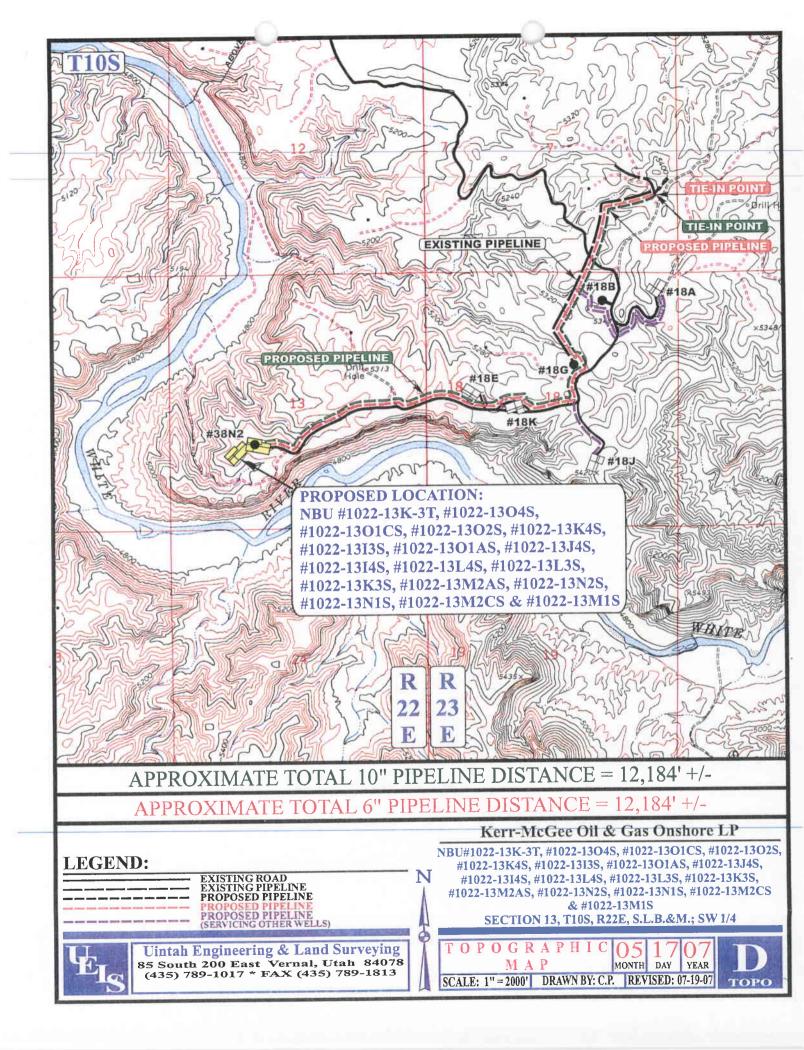
#1022-13K4S, #1022-13I3S, #1022-13O1AS, #1022-13J4S, #1022-1314S, #1022-13L4S, #1022-13L3S, #1022-13K3S, #1022-13M2AS, #1022-13N2S, #1022-13N1S, #1022-13M2CS & #1022-13M1S

SECTION 13, T10S, R22E, S.L.B.&M.; SW 1/4

Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 (435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHI MAP YEAR MONTH DAY SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00





Kerr-McGee Oil & Gas Onshore LP

NBU #1022-13K-3T, #1022-13O4S, #1022-13O1CS, #1022-13O2S, #1022-13K4S, #1022-13I3S, #1022-13O1AS, #1022-13J4S, #1022-13I4S, #1022-13I4S, #1022-13L4S, #1022-13L3S, #1022-13K3S, #1022-13M2AS, #1022-13N1S, #1022-13M2CS & #1022-13M1S

### PIPELINE ALIGNMENT

LOCATED IN UINTAH COUNTY, UTAH SECTION 13, T10S, R22E, S.L.B.&M.

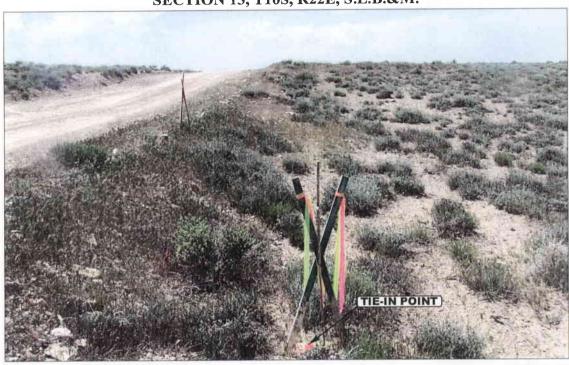


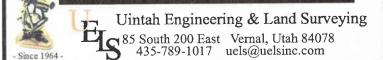
PHOTO: VIEW FROM TIE-IN POINT

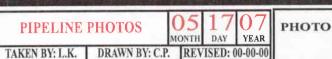
**CAMERA ANGLE: WESTERLY** 

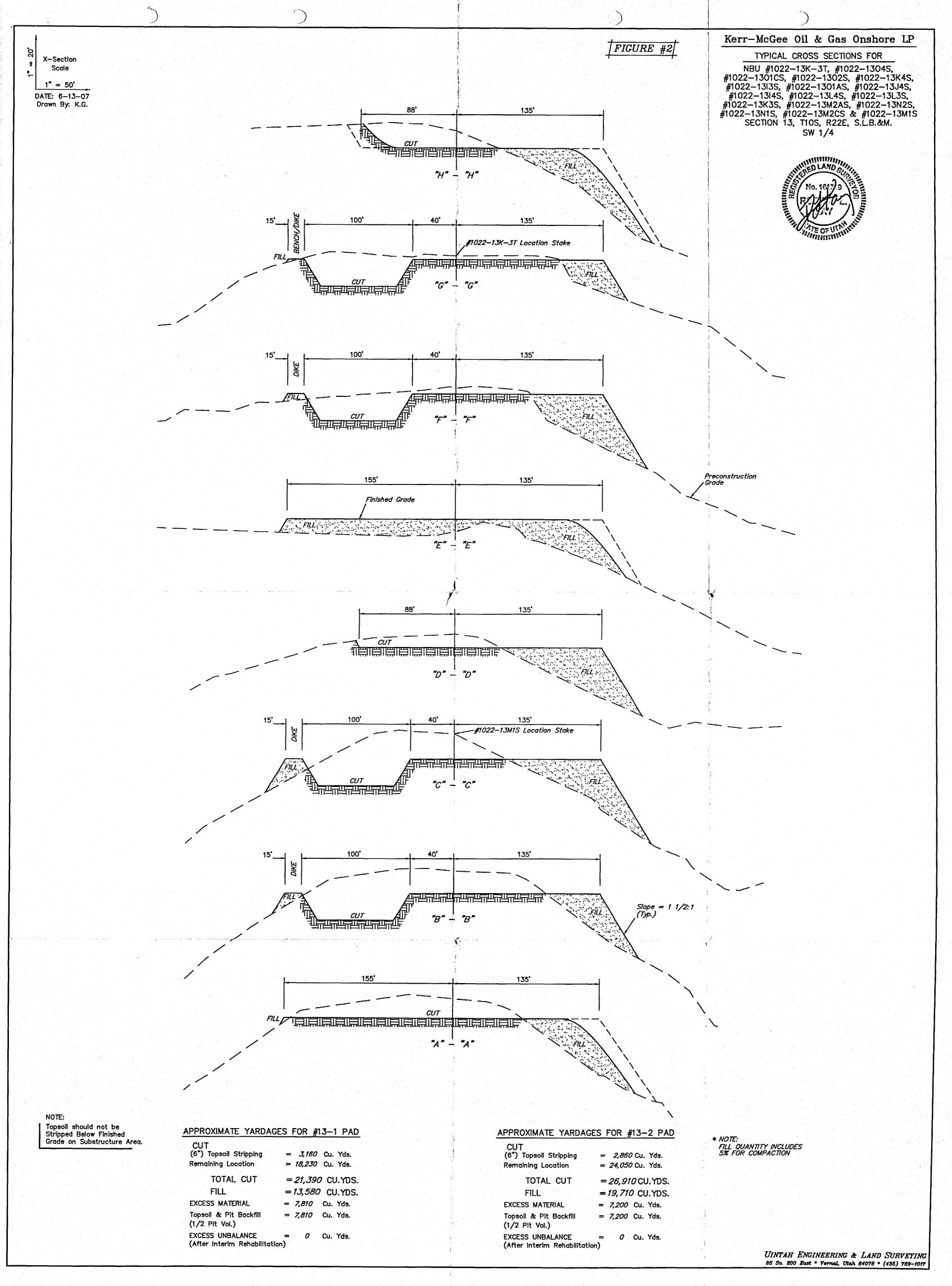


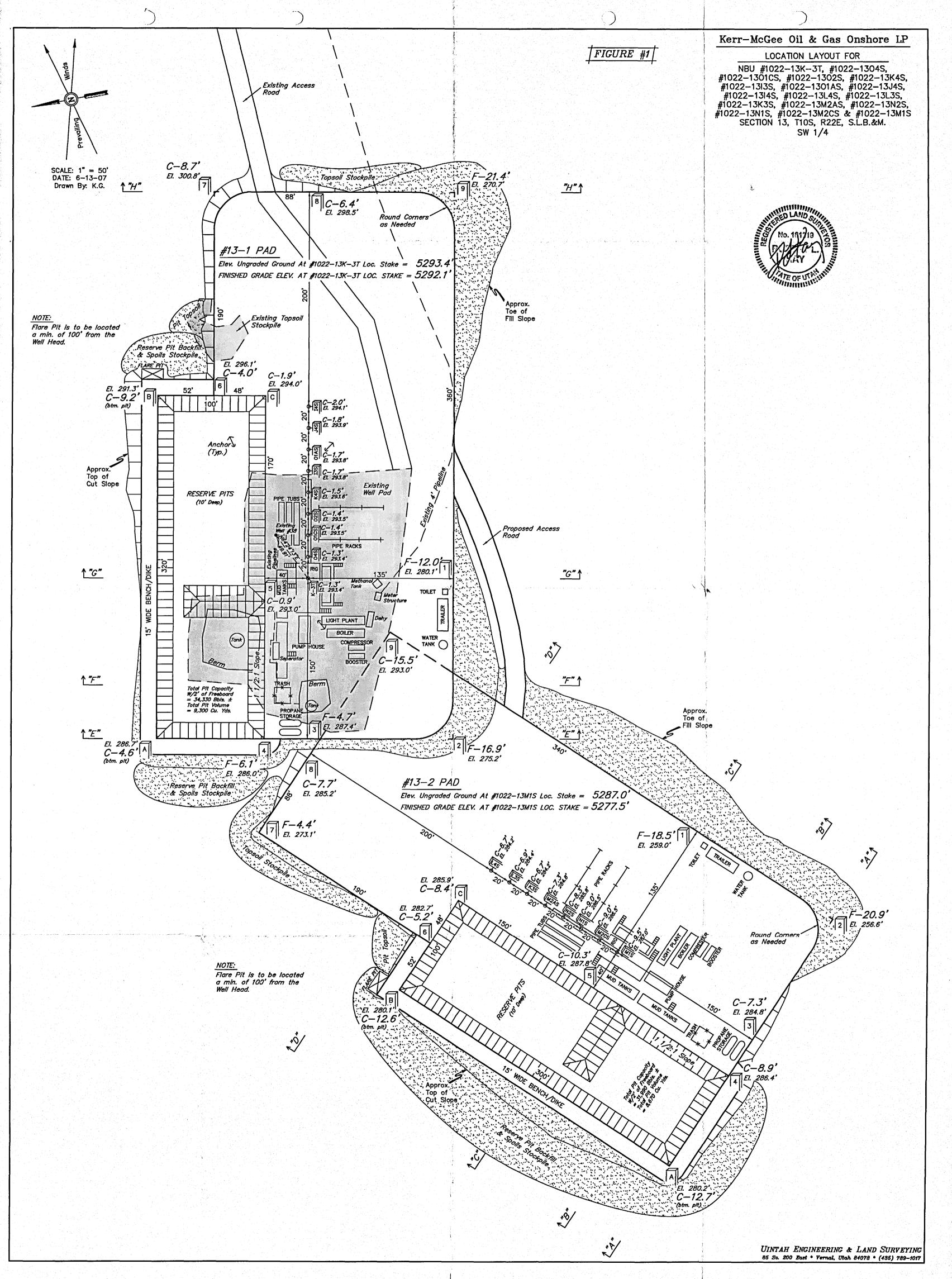
PHOTO: VIEW OF PIPELINE ALIGNMENT

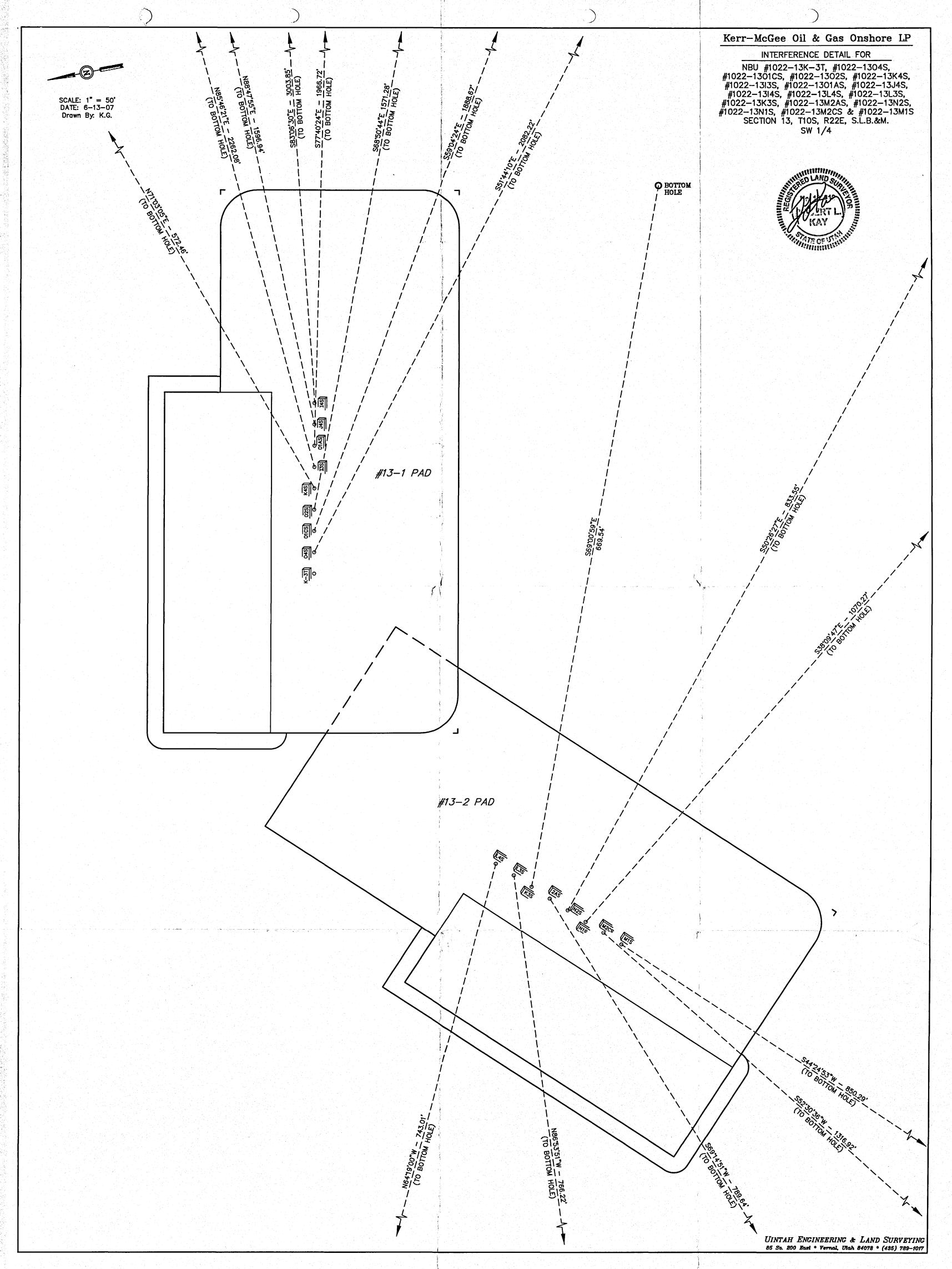
**CAMERA ANGLE: WESTERLY** 





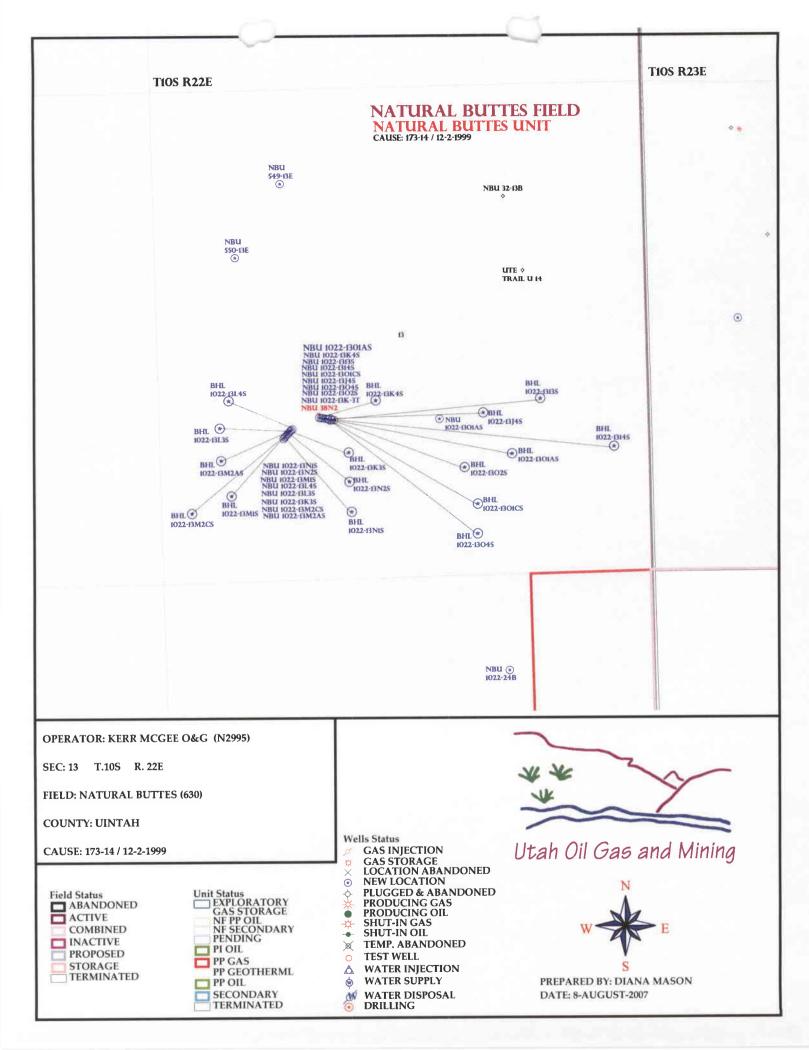






# WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEI	PD RECEIVED: 08/06/2007		API NO. ASSIGNED: 43-047-39476					
WELL NAME	MOCHE OFF CARC / NOOF	- )	PHONE NUMBER:	435-781-702	2.4			
CONTACT:		-	INSPECT LOCATN	I BY: /				
PROPOSED NESW	LOCATION: 13 100S 220E		Tech Review	CATN BY: /  Initials  ORMATION: WS:  THANE WELL? NO  NG:  TTES  General  rom Qtr/Qtr & 920'  Exception  t  No: 173-14  Directional Dr	Date			
	: 1747 FSL 1705 FWL		Engineering	+	8(31/07			
	0775 FSL 1920 FEL UINTAH			1000	01 1010 9			
	E: 39.94647 LONGITUDE: -109.3910		Geology					
UTM SUR	F EASTINGS: 637462 NORTHINGS: 4422	2845	Surface					
	MBER: STUO-08512-ST OWNER: 3 - State	COALBED METHAN	POSED FORMATION: WSMVD  BED METHANE WELL? NO					
RECEIVED	AND/OR REVIEWED:	LOCAT	ION AND SITING:					
✓ Pla		R649-2-3.						
	nd: Fed[] Ind[] Sta[] Fee[] No. 22013542 )	Unit: NATURAL BUTTES						
	tash (Y/N)	R649-3-2. General						
<del></del>	Shale 190-5 (B) or 190-3 or 190-13	Siting: 460 From Qtr/Qtr & 920' Between Wells  R649-3-3. Exception  Drilling Unit						
	ter Permit No. 43-8496 )							
	CC Review (Y/N) Date: )		Board Cause No: 1/73-/4					
•	e Surf Agreement (Y/N)	Eff Date: 17-9-49 Siting: Up of Sy u bd of Shincomm.						
	tent to Commingle (Y/N)	_	R649-3-11. Directional Drill					
COMMENTS	· Nuds Pu	site (06	-27-07)					
				RACIE				
STIPULAT	10NS:	- Su						
	3-5 2-	_ <u></u>	Const St. F	>				
	) /VIT	ر رچع	THE T		-			



# **Application for Permit to Drill Statement of Basis**

8/15/2007 Utah Division of Oil, Gas and Mining

Page 1

 APD No
 API WellNo
 Status
 Well Type
 Surf Ownr
 CBM

 483
 43-047-39476-00-00
 GW
 S
 No

Operator KERR-MCGEE OIL & GAS ONSHORE, LP Surface Owner-APD

Well Name NBU 1022-13O1CS Unit

Field UNDESIGNATED Type of Work

**Location** NESW 13 10S 22E S 1747 FSL 1705 FWL GPS Coord (UTM) 637462E 4422845N

### **Geologic Statement of Basis**

Kerr McGee proposes to set 2,100' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 4,300'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 13. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill 8/15/2007
APD Evaluator Date / Time

### **Surface Statement of Basis**

The general area is in the southeast end of the Natural Buttes Unit, which contains the White River and short rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Ouray, Utah is approximately 27.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

Seventeen new gas wells are proposed on two connected pads. The pads form a dogleg with the upper pad (#13-1) extending in an east-west direction and the lower pad (#13-2) in a northeast to southwest direction. Corners of the pads overlap with fill from the upper pad, corner 2, extending onto the lower pad at corner 9. Finished elevation of the upper pad is 15 feet higher than the lower pad. A road is proposed on the inside of the dog-leg ramping down to the lower pad. The pads are located on top of a medium width to narrow ridge-top elevated about 500 vertical feet above the White River. The White River forms a bend in the area and somewhat surrounds the locations except on the east-northeast sides. Closest horizontal distance to any well is approximately 1550 feet. Slopes from the ridge steepen and become near vertical sandstone ledges short distances from the pads. Soils are shallow with a rocky subsurface. Except for reserve pit construction blasting is not expected to be required. Pad construction will primarily consist of excavating the top of the ridge filling on the sides of the ridge All fills will catch on existing natural side slopes. No drainage concerns exist. Elongated reserve pits are planned. Pits will be in cut except along corner 'C' on the lower #13-2 pad and corner 'F' on the upper #13-1 pad. Both areas will be reinforced with embankments which include a 15' wide bench and spoils storage. Reserve pits will be lined with double 20 mil. liners and a appropriate thickness of sub felt to cushion all rocks. A pad for a producing gas well (NBU #38-N2) exist on a portion of the upper pad. Area encompassed for the pads not including spoils storage is approximately 6.7 acres.

When the wells are completed the west tank on the west corner of the upper pad will be in view for about 1/8 mile along the river bottom. Even though rafters would have to look behind them to see this tank, Kerr McGee agreed to use a low profile tank for this location.

# **Application for Permit to Drill Statement of Basis**

Utah Division of Oil, Gas and Mining

Page 2

Both the surface and minerals for this location are owned by SITLA. Jim Davis of SITLA attended the pre-site visit and expressed no concerns regarding the proposed location except for those discussed above.

The location appears to be the only site for constructing pads and drilling and operating multiple wells in the area.

It was mutually agreed that the most significant environmental concern with drilling and operating wells in this area was to avoid any leaks or spills from the operations reaching the White River. To reduce chances of this happening, Carroll Estes of Kerr McGee committed to line the pit with a double 20 mil liner with an appropriate thickness of felt sub-liner dependent upon the roughness of the surface of the constructed pit. He also stated they would formulate and follow a plan to monitor the level of fluids in the reserve pit as well as observing the surrounding terrain for any possible leaks. Corrugated metal containments will be constructed around all tanks used for production.

Floyd Bartlett

6/27/2007

Date / Time

**Onsite Evaluator** 

Conditions of Approval / Application for Permit to Drill

Category

**Condition** 

Pits

8/15/2007

A double synthetic liner each with a minimum thickness of 20 mils and an appropriate

thickness of felt sub-liner to cushion the liners shall be properly installed and

maintained in the reserve pit.

### ON-SITE PREDRILL EVALUATION

### Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, LP

Well Name NBU 1022-1301CS

API Number 43-047-39476-0 APD No 483 Field/Unit UNDESIGNATED

Location: 1/4,1/4 NESW Sec 13 Tw 10S Rng 22E 1747 FSL 1705 FWL

GPS Coord (UTM) 637471 4422850 Surface Owner

### **Participants**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Carroll Estes, Tony Kznick, and Clay Einerson (Kerr McGee), David Kay (Uintah Engineering and Land Surveying), and Daniel Emmett (UDWR)

### Regional/Local Setting & Topography

The general area is in the southeast end of the Natural Buttes Unit, which contains the White River and short rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Ouray, Utah is approximately 27.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

Seventeen new gas wells are proposed on two connected pads. The pads form a dogleg with the upper pad (#13-1) extending in an east-west direction and the lower pad (#13-2) in a northeast to southwest direction. Corners of the pads overlap with fill from the upper pad, corner 2, extending onto the lower pad at corner 9. Finished elevation of the upper pad is 15 feet higher than the lower pad. A road is proposed on the inside of the dog-leg ramping down to the lower pad. The pads are located on top of a medium width to narrow ridge-top elevated about 500 vertical feet above the White River. The White River forms a bend in the area and somewhat surrounds the locations except on the east-northeast sides. Closest horizontal distance to any well is approximately 1550 feet. Slopes from the ridge steepen and become near vertical sandstone ledges short distances from the pads. Soils are shallow with a rocky subsurface. Except for reserve pit construction blasting is not expected to be required. Pad construction will primarily consist of excavating the top of the ridge filling on the sides of the ridge. All fills will catch on existing natural side slopes. No drainage concerns exist. Elongated reserve pits are planned. Pits will be in cut except along corner 'C' on the lower #13-2 pad and corner 'F' on the upper #13-1 pad. Both areas will be reinforced with embankments which include a 15' wide bench and spoils storage. Reserve pits will be lined with double 20 mil. liners and a appropriate thickness of sub felt to cushion all rocks. A pad for a producing gas well (NBU #38-N2) exist on a portion of the upper pad. Area encompassed for the pads not including spoils storage is approximately 6.7 acres.

Both the surface and minerals for this location are owned by SITLA.

### Surface Use Plan

**Current Surface Use** 

Grazing
Recreational
Wildlfe Habitat
Existing Well Pad

**New Road** 

Miles Well Pad Src Const Material Surface Formation

0 Width 290 Length 510 Onsite UNTA

Ancillary Facilities N

### Waste Management Plan Adequate? Y

8/15/2007 Page 1

### **Environmental Parameters**

### Affected Floodplains and/or Wetland N

### Flora / Fauna

Moderately vegetated with black sagebrush, halogeton, shadscale, rabbit brush, broom snakeweed, cheatgrass, sixweek fescue and spring annuals.

Antelope, coyote, small mammals and birds. Winter domestic sheep grazing

### Soil Type and Characteristics

Shallow gravely sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

**Drainage Diverson Required** N

Berm Required? N

**Erosion Sedimentation Control Required?** N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources?

### Reserve Pit

Site-Specific Factors	Site Ranking					
Distance to Groundwater (feet)	>200		0			
Distance to Surface Water (feet)	>1000		0			
Dist. Nearest Municipal Well (ft)	>5280					
Distance to Other Wells (feet)	<300		20			
Native Soil Type	Mod permeability					
Fluid Type	Fresh Water		5			
Drill Cuttings	Normal Rock		0			
Annual Precipitation (inches)	<10		0			
Affected Populations	<10		0			
<b>Presence Nearby Utility Conduits</b>	Not Present		0			
		Final Score	35	1 Sensitivity Level		

### Characteristics / Requirements

The reserve pit is proposed on the northwest corner of the upper pad. Portions of the outer edge will be within partial fill. A 15' wide bench/dike is planned along the outer edge as well as reserve pit spoils storage along the west end. Finished pit dimensions are 100' x 320' x 10' deep. Carroll Estes of Kerr McGee committed to line the pit with a double 20 mil liner with an appropriate thickness of felt sub-liner dependent upon the roughness of the surface of the constructed pit.

Mr. Estes also stated they would formulate and follow a plan to monitor the level of fluids in the reserve pit as well as observing the surrounding terrain for any possible leaks.

### **Other Observations / Comments**

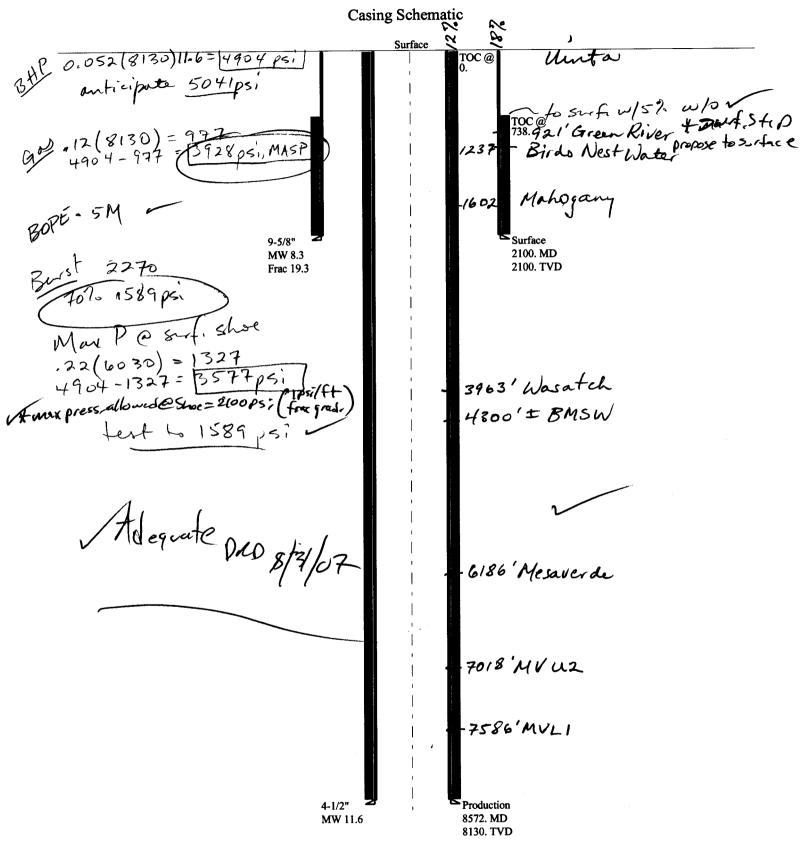
Daniel Emmet represented the Utah Division of Wildlife Resources. Mr. Emmet stated the area is classified as critical yearlong habitat for antelope. He however recommended no stipulations for this species as the loss of forage from this location is not significant and water not forage is the factor limiting the herd population in the area. No other wildlife is expected to be affected. He gave Carrol Estes, representing Kerr McGee, and Jim Davis copies of his evaluation and a DWR recommended seed mix to use when re-vegetating the area.

Floyd Bartlett **Evaluator** 

6/27/2007

Date / Time

# 2007-08 Kerr McGee NBU 1022-1301CS



2007-08 Kerr McGee NBU 1022-13O1CS Well name:

Kerr McGee Oil & Gas Onshore L.P. Operator:

Surface Project ID: String type: 43-047-39476

Uintah County, Utah Location:

**Environment:** Minimum design factors: Design parameters:

H2S considered? No Collapse: Collapse Surface temperature: 75 °F 1.125 Design factor Mud weight: 8,300 ppg

Bottom hole temperature: 104 °F Design is based on evacuated pipe.

1.40 °F/100ft Temperature gradient:

Burst:

Design factor 1.00 Cement top: 738 ft

**Burst** 

Max anticipated surface

pressure: 1,848 psi

0.120 psi/ft Non-directional string. Internal gradient: Tension:

1.80 (J) Calculated BHP 2,100 psi 8 Round STC: 1.80 (J) 8 Round LTC: 1.60 (J) No backup mud specified. Buttress:

1.50 (J) Premium: 1.50 (B) Body vield:

Tension is based on buoyed weight.

11.600 ppg Next mud weight: 1,844 ft Next setting BHP: 4,899 psi Neutral point: Fracture mud wt: 19.250 ppg

Minimum section length: 1,300 ft

Re subsequent strings:

8,130 ft

4.26 J

Next setting depth:

Fracture depth: 2,100 ft Injection pressure: 2,100 psi

True Vert Measured Drift Internal **Nominal** End Segment Run Depth Depth Diameter Capacity Length Size Weight Grade **Finish** Seq (lbs/ft) (ft) (ft) (in) (ft³) (ft) (in) 2100 927.9 2100 9.625 32.30 H-40 ST&C 2100 8.876 1 Burst **Burst Tension Tension Tension** Run Collapse Collapse Collapse **Burst** Design Load Strength Design Strength Design Load Strength Seq Load **Factor** (Kips) **Factor Factor** (psi) (psi) (Kips)

2270

1.08

2100

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Minerals

(psi)

1370

1.513

(psi)

905

1

Phone: (801) 538-5357 FAX: (801) 359-3940

Date: August 27,2007 Salt Lake City, Utah

254

Collapse is based on a vertical depth of 2100 ft, a mud weight of 8.3 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name: 2007-08 Kerr McGee NBU 1022-1301CS

Operator: Kerr McGee Oil & Gas Onshore L.P.

String type: Production Project ID: 43-047-39476

Location: Uintah County, Utah

Minimum design factors: Environment:

Design parameters:Minimum design factors:Environment:CollapseCollapse:H2S considered?NoMud weight:11.600 ppgDesign factor1.125Surface temperature:75 °FDesign is based on evacuated pipeBottom hole temperature:189 °F

Design is based on evacuated pipe.

Bottom hole temperature: 189 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,500 ft

<u>Burst:</u>

Design factor 1.00 Cement top: Surface

Burst

Max anticipated surface

pressure: 3,111 psi Internal gradient: 0.220 psi/ft

Calculated BHP 4,899 psi

No backup mud specified.

Tension: Directional Info - Build & Drop
8 Round STC: 1.80 (J) Kick-off point 2160 is

8 Round STC: 1.80 (J) Kick-off point 2160 ft
8 Round LTC: 1.80 (J) Departure at shoe: 1930 ft
Buttress: 1.60 (J) Maximum dogleg: 2.5 °/100ft
Premium: 1.50 (J) Inclination at shoe: 0 °

Premium: 1.50 (J) Body yield: 1.50 (B)

Tension is based on buoyed weight. Neutral point: 7,161 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8572	4.5	11.60	I-80	LT&C	8130	8572	3.875	748
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4899	6360	1.298	4899	7780	1.59	78	212	2.72 J

Prepared Helen Sadik-Macdonald by: Div of Oil,Gas & Minerals

Phone: (801) 538-5357 FAX: (801) 359-3940 Date: August 27,2007 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8130 ft, a mud weight of 11.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# (I) KerrMcGee

Kerr McGee Oil and Gas Onshore LP 1368 South 1200 East • Vernal, UT 84078 435-789-4433 • Fax 435-781-7094

July 31, 2007

Diana Whitney
State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-5801

RE:

Directional Drilling R649-3-11

NBU 1022-13O1CS

1747'FSL, 1705'FWL (Surface)

775'FSL, 1920'FEL (Bottomhole)

Uintah County, Utah

Dear Ms. Whitney:

Pursuant to filling of Kerr McGee Oil & Gas Onshore L.P. Application for Permit to Drill regarding the above referenced well on July 31, 2007, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to location and siting of wells.

- NBU 1022-1301CS is located within the Natural Buttes Unit Area.
- Kerr McGee Oil & Gas Onshore L.P., is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr McGee Oil & Gas Onshore L.P., will be able to utilize the existing road and pipeline in the area.
- Furthermore, Kerr McGee Oil & Gas Onshore L.P. hereby certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr McGee Oil & Gas Onshore L.P. requests that the permit be granted pursuant to R649-3-11.

Sincerely

Senior Land Admin Specialist

RECEIVED
AUG 0 6 2007

DIV. OF OIL, GAL & MINING

# **United States Department of the Interior**

## BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

August 9, 2007

#### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2007 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2007 within the Natural Buttes Unit, Uintah County, Utah.

API# WELL NAME LOCATION

(Proposed PZ Wasatch/MesaVerde)

43-047-39473	NBU	1022-13K4S BHL		T10S T10S	R22E R22E	1739 1925		1745 2280	FWL FWL
43-047-39474	NBU	1022-1313S BHL			R22E R22E		FSL FSL	1764 1225	FWL FEL
43-047-39475	NBU	1022-1314S BHL		 T10S T10S	R22E R22E		FSL FSL	1824 0440	FWL FEL
43-047-39476	NBU	1022-1301CS BHL	Sec Sec	 	R22E R22E		FSL FSL	1705 1920	FWL FEL
43-047-39477	NBU	1022-13J4S BHL			R22E R22E		FSL FSL	1804 1845	FWL FEL
43-047-39478	NBU	1022-1301AS BHL	Sec Sec	 	R22E R22E			1784 1540	FWL FEL
43-047-39479	NBU	1022-1302S BHL	Sec Sec		R22E R22E	1743 1175	FSL FSL	1725 2055	FWL FEL

43-047-39480	NBU	1022-1304S BHL				R22E R22E				FWL FEL
43-047-39481	NBU	1022-13K3S BHL				R22E R22E				
43-047-39482	NBU	1022-13M1S BHL				R22E R22E				FWL FWL
43-047-39483	NBU	1022-13M2AS BHL				R22E R22E				FWL FWL
43-047-39484	NBU	1022-13N1S BHL				R22E R22E			1302 1990	FWL FWL
43-047-39485	NBU	1022-13L3S BHL	-			R22E R22E				FWL FWL
43-047-39486	NBU	1022-13L4S BHL				R22E R22E	1000		1370 0690	FWL FWL
43-047-39487	NBU	1022-13N2S BHL				R22E R22E			1316 1975	FWL FWL
43-047-39488	NBU	1022-13M2CS BHL				R22E R22E			1289 0270	FWL FWL
43-047-39489	NBU	1022-13K-3T	Sec	13	T10S	R22E	1754	FSL	1666	FWL

Our records indicate the bottom hole location of the NBU 1022-1314S is closer than 460 feet from the Natural Buttes Unit boundary.

We have no objections to permitting the wells so long as the unit operator receives an exception to the locating and siting requirements of the State of Utah (R649-3-2).

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:8-9-07

From: Ed Bonner
To: Mason, Diana
Date: 8/20/2007 3:07 PM
Subject: Well Clearance

CC: Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil

The following wells have been given cultural resources clearance by the Trust Lands Cultural Resources Group:

#### Cabot Oil & Gas Corporation McKenna 21-32 (API 43 037 31863)

Kerr McGee Oil & Gas Onshore LP NBU 1022-13K4S (API 43 047 39473) NBU 1022-13I3S (API 43 047 39474) NBU 1022-13I4S (API 43 047 39475) NBU 1022-1301CS (API 43 047 39476) NBU 1022-13J4S (API 43 047 39477) NBU 1022-1301AS (API 43 047 39478) NBU 1022-13O2S (API 43 047 39479) NBU 1022-13O4S (API 43 047 39480) NBU 1022-13K3S (API 43 047 39481) NBU 1023-13M1S (API 43 047 39482) NBU 1022-13M2AS (API 43 047 39483) NBU 1022-13N1S (API 43 047 39484) NBU 1022-13L3S (API 43 047 39485) NBU 1022-13L4S (API 43 047 39486) NBU 1022-13N2S (API 43 047 39487) NBU 1022-13M2SC (API 43 047 39488) NBU 1022-13K-3T (API 43 047 39489)

Petro-Canada Resources (USA), Inc State 16-41 (API 43 015 30721) State 32-44 (API 43 015 30722)

Royale Energy, Inc Vernal Equinox 2-2 (API 43 019 31552)

XTO Energy, Inc State of Utah 16-8-31-13 (API 43 015 30719) State of Utah 16-8-31-33D (API 43 015 30718)

If you have any questions regarding this matter please give me a call.



# State of Utah DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA Division Director

September 4, 2007

Kerr McGee Oil & Gas Onshore LP 1368 S 1200 E Vernal, UT 84078

Re: Natural Buttes Unit 1022-1301CS Well, 1747' FSL, 1705' FWL, NE SW, Sec. 13,

T. 10 South, R. 22 East, Bottom Location 775' FSL, 1920' FEL, SW SE, Sec. 13,

T. 10 South, R. 22 East, Uintah County, Utah

### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39476.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc: Uintah County Assessor

**SITLA** 

Bureau of Land Management, Vernal Office



Operator:		Kerr McGee Oil & Gas Onshore LP				
Well Name & Numl	ber	Natural	Buttes Unit 1022-13O1C	<u>S</u>		
API Number:	_	43-047-				
Lease:		STUO-	08512-ST			
Location:	NE SW SW SE	Sec. 13	<b>T.</b> <u>10 South</u> <b>T.</b> 10 South	R. 22 East R. 22 East		

## **Conditions of Approval**

#### 1 General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to spudding the well contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well contact Dustin Doucet
- Any changes to the approved drilling plan contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

Dan Jarvis at: (801) 538-5338 office (801) 942-0873 home
 Carol Daniels at: (801) 538-5284 office

• Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

## 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
- 5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
- 6. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
- 7. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.
- 8. Surface casing shall be cemented to the surface.

### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

1368 SOUTH 1200 EAST

city VERNAL

state UT zip 84078 Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304739479	NBU 1022-13O2S		NESW	13	108	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	s	pud Da	te		y Assignment fective Date
B	99999	2900	1	1/13/200	 07	11/	36/07

SPUD WELL LOCATION ON 11/13/2007 AT 12:00 PM.

BHL=SWSE

BHL = SWSE

Well 2

API Number	Well Name QQ Sec Twp Rng		QQ Sec Twp		County		
4304739476	NBU 1022-13O1CS		NESW 13 10S		108	22E	UINTAH
Action Code	Current Entity New Entity Number Number		s	Spud Date			ty Assignment ffective Date
B	99999	2900	1	11/13/2007		//	126/07
	J PETE MARTIN BUCKE D WELL LOCATION ON			2 <b>.W</b>	- 5/	1.15E	

Wall 3

API Number	Well	lame	QQ	Sec	Twp	Rng	County
4304739473	NBU 1022-13K4S	22-13K4S		13	108	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
В	99999	3900	11/13/2007		11/2	36/07	
	PETE MARTIN BUCKE WELL LOCATION ON			HL:	= NE	SW	

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

SHEILA UPCHEGO

Name (Please-Print)

SENIOR LAND SPECIALIST Title

11/14/2007 Date

(5/2000)

RECEIVED NOV 1 4 2007

# STATE OF UTAH ARTMENT OF NATURAL RESOURC

DEPARTMENT OF NATURAL RESOURCES	
DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	7. UNIT OF CA AGREEMENT NAME: UNIT #891008900A
1. TYPE OF WELL OIL WELL GAS WELL OTHER	8. WELL NAME and NUMBER: NBU 1022-1301CS
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE LP	9. API NUMBER: 4304739476
3. ADDRESS OF OPERATOR: 1368 SOUTH 1200 EAST CITY VERNAL STATE UT ZIP 84078 PHONE NUMBER: (435) 781-7024	10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747'FSL, 1705'FWL	COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 13 10S 22E	STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION TYPE OF ACTION	
NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start:  CASING REPAIR  CHANGE TO PREVIOUS PLANS  DEEPEN  FRACTURE TREAT  NEW CONSTRUCTION  OPERATOR CHANGE  CHANGE TUBING  PLUG AND ABANDON	REPERFORATE CURRENT FORMATION  SIDETRACK TO REPAIR WELL  TEMPORARILY ABANDON  TUBING REPAIR  VENT OR FLARE
SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:  CHANGE WELL NAME PRODUCTION (START/RESUME) COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	WATER DISPOSAL WATER SHUT-OFF OTHER: WELL SPUD
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volume	es, etc.
MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" W/28 SX READY MIX.	36.7# SCHEDULE 10 PIPE. CMT
SPUD WELL LOCATION ON 11/13/2007 AT 9:00 AM	
NAME (PLEASE PRINT) SHEILA UPCHEGO	DMIN SPECIALIST
SIGNATURE MULL MULLIN DATE 11/14/2007	
· V	RECEIVED
This space for State use only)	NOV 2 0 2007

DIV. OF OIL, GAS & MINING

## STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES	
DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST
SUNDRY NOTICES AND REPORTS ON	WELLS  6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current botton drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for sur	n-hole depth, reenter plugged wells, or to
1. TYPE OF WELL OIL WELL GAS WELL OTHER	8. WELL NAME and NUMBER:  NBU 1022-1301CS
2. NAME OF OPERATOR:	9. API NUMBER:
KERR McGEE OIL & GAS ONSHORE LP  3. ADDRESS OF OPERATOR:	4304739476  PHONE NUMBER: 10. FIELD AND POOL, OR WILDCAT:
1368 SOUTH 1200 EAST CITY VERNAL STATE UT ZIP 84078	
4. LOCATION OF WELL	LUNITALE
FOOTAGES AT SURFACE: 1747'FSL, 1705'FWL	COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 13 10S 22E	STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NAT	TURE OF NOTICE, REPORT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION
NOTICE OF INTENT	EEPEN REPERFORATE CURRENT FORMATION
	RACTURE TREAT SIDETRACK TO REPAIR WELL
Approximate date work will start: CASING REPAIR N	EW CONSTRUCTION TEMPORARILY ABANDON
CHANGE TO PREVIOUS PLANS O	PERATOR CHANGE TUBING REPAIR
CHANGE TUBING P	LUG AND ABANDON VENT OR FLARE
	LUG BACK WATER DISPOSAL
(Submit Original Form Only)  CHANGE WELL STATUS	RODUCTION (START/RESUME) WATER SHUT-OFF
Date of work completion:  COMMINGLE PRODUCING FORMATIONS R	ECLAMATION OF WELL SITE
CONVERT WELL TYPE	ECOMPLETE - DIFFERENT FORMATION
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent of	details including dates, depths, volumes, etc.
MIRU BILL MARTIN AIR RIG ON 11/27/2007. DRILLED 12 1/4" CSG. LEAD CMT W/200 SX HIFILL CLASS G @11.0 PPG 3.82 PPG 1.15 YIELD. RETURNS 120 BBL INTO DISPLACEMENT N W/125 SX PREM CLASS G @15.8 PPG 1.15 YIELD DOWN 1" F CLASS G @15.8 PPG 1.15 YIELD. DOWN BACKSIDE GOOD C	YIELD. TAILED CMT W/200 SX PREM CLASS G @15.8 O LEAD CMT TO SURFACE. RAN 200' OF 1" PIPE. CMT PIPE. NO CMT TO SURFACE. TOP OUT W/125 SX PREM
WORT.	
· 	
NAME (PLEASE PRINT) SHEILA UPCHEGO	TITLE SENIOR LAND ADMIN SPECIALIST
SIGNATURE ////////////////////////////////////	DATE 12/13/2007
	Dron
This space for State use only)	RECEIVED

DEC 1 4 2007

DEPARTMENT OF NATURAL RESOURCES	T ORW 9
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	7. UNIT OF CA AGREEMENT NAME: UNIT #891008900A
1. TYPE OF WELL OIL WELL GAS WELL OTHER	8. WELL NAME and NUMBER: NBU 1022-1301CS
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE LP	9. API NUMBER: 4304739476
3. ADDRESS OF OPERATOR: PHONE NUMBER:	10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
1368 SOUTH 1200 EAST CITY VERNAL STATE UT 21P 84078 (435) 781-7024 4. LOCATION OF WELL	NATORAL BOTTLO
FOOTAGES AT SURFACE: 1747'FSL, 1705'FWL	COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 13 10S 22E	STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO	ORT, OR OTHER DATA
TYPE OF SUBMISSION TYPE OF ACTION	
NOTICE OF INTENT	REPERFORATE CURRENT FORMATION
(Submit in Duplicate) ALTER CASING FRACTURE TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start: CASING REPAIR NEW CONSTRUCTION	TEMPORARILY ABANDON
CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	TUBING REPAIR
CHANGE TUBING PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK	WATER DISPOSAL
(Submit Original Form Only)  CHANGE WELL STATUS  PRODUCTION (START/RESUME)	WATER SHUT-OFF
Date of work completion:  COMMINGLE PRODUCING FORMATIONS  RECLAMATION OF WELL SITE	OTHER: FINAL DRILLING
CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	OPERATIONS
FEB	DUCTION CSG. LEAD CMT W/310 PG 1.31 YIELD. DROP PLUG & LUG HELD. GOT BACK 22.0 BBL
NAME (PLEASE PRINT) SHEILA UPCHEGO TITLE SENIOR LAND A	ADMIN SPECIALIST
SIGNATURE	

(This space for State use only)

# NOTICE OF LATE REPORTING DRILLING & COMPLETION INFORMATION

Utah Oil and Gas Conservation General Rule R649-3-6 states that.

Operators shall submit monthly status reports for each drilling well (including wells where drilling operations have been suspended).

Utah Oil and Gas Conservation General Rule R649-3-21 states that,

- A well is considered completed when the well has been adequately worked to be capable of producing oil or gas or when well testing as required by the division is concluded.
- ➤ Within 30 days after the completion or plugging of a well, the following shall be filed:
  - Form 8. Well Completion or Recompletion Report and Log
  - · A copy of electric and radioactivity logs, if run
  - · A copy of drillstem test reports.
  - A copy of formation water analyses, porosity, permeability or fluid saturation determinations
  - · A copy of core analyses, and lithologic logs or sample descriptions if compiled
  - A copy of directional, deviation, and/or measurement-while-drilling survey for each horizontal well

Failure to submit reports in a timely manner will result in the issuance of a Notice of Violation by the Division of Oil, Gas and Mining, and may result in the Division pursuing enforcement action as outlined in Rule R649-10, Administrative Procedures, and Section 40-6-11 of the Utah Code.

As of the mailing of this notice, the division has	not received the requi	red reports for
Operator: Kerr-McGee Oil & Gas Onshore, LP	Today's	Date: 04/21/2008
Well: 43 047 39476 NBU 1022-1301CS 10S 22E 13	API Number:	Drilling Commenced:

✓ List Attached

To avoid compliance action, required reports should be mailed within 7 business days to:

Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

P.O. Box 145801

Salt Lake City, Utah 84114-5801

If you have questions or concerns regarding this matter, please contact Rachel Medina at (801) 538-5260

cc: Well File Compliance File

# NOTICE OF LATE REPORTING DRILLING & COMPLETION INFORMATION

## **ATTACHMENT**

Operator:	Kerr-McGee Oil & Gas Onshore, LP	Today's Date:	04/21/2008

Well:	API Number:	Drilling Commenced:
NBU 1022-13L3S	4304739485	10/26/2007
NBU 1022-13L4S	4304739486	10/26/2007
NBU 1022-13K3S	4304739481	10/27/2007
NBU 1022-13N2S	4304739487	10/27/2007
NBU 1022-13M2AS	4304739483	10/29/2007
NBU 1022-13N1S	4304739484	10/29/2007
NBU 1022-13M2CS	4304739488	10/29/2007
NBU 1022-13M1S	4304739482	10/30/2007
NBU 1021-1G	4304739001	11/01/2007
NBU 102213O4S	4304739480	11/12/2007
NBU 1022-13K-3T	4304739489	11/12/2007
NBU 1022-13O1CS	4304739476	11/13/2007
NBU 1022-13I4S	4304739475	11/15/2007
NBU 1022-13J4S	4304739477	11/15/2007

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	DIVISION OF OIL, GAS AND MI		5. LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST
SUNDRY	Y NOTICES AND REPORTS	S ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill r drill horizontal k	new wells, significantly deepen existing wells below cur aterals. Use APPLICATION FOR PERMIT TO DRILL f	rrent bottom-hole depth, reenter plugged wells, or to form for such proposals.	7. UNIT OF CA AGREEMENT NAME: UNIT #891008900A
1. TYPE OF WELL OIL WELL	GAS WELL 🖊 OTHER_		8. WELL NAME and NUMBER: NBU 1022-1301CS
2. NAME OF OPERATOR:	2 01101107517		9. API NUMBER:
KERR McGEE OIL & GAS  3. ADDRESS OF OPERATOR:	S ONSHORE LP	PHONE NUMBER:	4304739476  10. FIELD AND POOL, OR WILDCAT:
1368 SOUTH 1200 EAST	Y VERNAL STATE UT ZIP	84078 (435) 781-7024	NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747'	FSL, 1705'FWL		COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RAN	NGE, MERIDIAN: NESW 13 10S 2	22E	STATE: UTAH
11. CHECK APP	ROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT	ACIDIZE	DEEPEN	REPERFORATE CURRENT FORMATION
(Submit in Duplicate)	ALTER CASING	FRACTURE TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR	NEW CONSTRUCTION	TEMPORARILY ABANDON
	CHANGE TO PREVIOUS PLANS	OPERATOR CHANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT (Submit Original Form Only)	CHANGE WELL NAME	PLUG BACK	WATER DISPOSAL
Date of work completion:	CHANGE WELL STATUS	PRODUCTION (START/RESUME)	WATER SHUT-OFF
	COMMINGLE PRODUCING FORMATIONS	RECLAMATION OF WELL SITE	OTHER: PRODUCTION
	CONVERT WELL TYPE	RECOMPLETE - DIFFERENT FORMATION	START-UP
THE SUBJECT WELL LO		DDUCTION ON 05/16/2008 AT 2:	
NAME (PLEASE PRINT) 6HEILA L	JPCHEGO	TITLE SENIOR LAND A	DMIN SPECIALIST
SIGNATURE / / / /	KMMMY)	DATE 5/19/2008	
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**RECEIVED** MAY 2 1 2008

**NBU 1022-130-1CS** AFE No.: 2008169 End Date: 2/13/2008 **Operation Summary Report** Operator FIELD NAME SPUD DATE KB ROUTE KERR-MCGEE OIL & GAS ONSHORE LP NATURAL BUTTES 11/13/07 5,293 5310 API COUNTY DIVISION 4304739476 UTAH UINTAH ROCKIES Lat./Long.: Lat./Long.: 39.94644 / -109.39151 Q-Q/Sect/Town/Range: /13/10S/22E Footages: 1,747.00' FSL 1,705.00' FWL MTD LOG MD PBMD TVD PBTVD 8508 8089 EVENT ACTIVITY: DRILLING **EVENT INFORMATION:** REASON: **OBJECTIVE: DEVELOPMENT** DATE WELL STARTED/RESUMED: **OBJECTIVE2:** Event End Status: COMPLETE Begin Mobilization Rig On Location Rig Operation Start Finish Drilling Rig Release RIG OPERATIONS: Rig Charges Rig Off Location PETE MARTIN DRILLING / I 11/13/2007 11/13/2007 11/27/2007 11/13/2007 11/13/2007 Code Time Duration Phase Subco P/U Operation Date Start-End (hr) de 11/13/2007 SUPERVISOR: LEW WELDON 9:00 - 15:00 MOVE IN AND RIG UP BUCKET RIG SPUD WELL @ 0900 HR 6.00 DRLCON 02 11/13/07 DRILL AND SET 40' OF SCHEDULE 10 PIPE DRILL RODENT HOLES FOR RIG 83 BLM AND STATE NOTFIED OF SPUD 11/27/2007 SUPERVISOR: LEW WELDON 15:30 - 18:00 2.50 MOVE IN AND RIG UP AIR RIG SPUD WELL @ 1530 HR 11/27/07 DRLSUR 02 DRILL TO 300' AND SDFN 18:00 - 0:00 6.00 DRLSUR 12 **SDFN** 11/28/2007 SUPERVISOR: LEW WELDON 0:00 - 6:00 6.00 DRLSUR 12 WOAR RIH TO 300' AND DRILL TO 1020' T/D PIOLET HOLE CONDITION 6:00 - 16:00 10.00 DRLSUR 02 HOLE 1 HR POOH DRLSUR WOAR 16:00 - 0:00 8.00 12 12/10/2007 SUPERVISOR: LEW WELDON DRLSUR Ρ WAIT ON BILL JR AIR RIG 0.00 - 3:00 3.00 12 3:00 - 12:00 9.00 DRLSUR 02 MOVE OVER AND RIG UP AIR RIG SPUD WELL @ 0300 HR 12/10/07 HIT TRONA WATER @ 1470' DA AT REPORT TIME DRILL TO 1490' AND CHARGE PUMP WENT DOWN GET A NEW 12:00 - 19:00 7.00 DRLSUR 02 ONE BROUGHT FROM TOWN DRLSUR Z IN THE PROCESS BILL JR CREW RIDE GOT STUCK PULLING 19:00 - 0:00 5.00 12 THE CHARGE PUMP HAD TO WAIT ON A BLADE TO PULL THEM OUT. 12/11/2007 SUPERVISOR: LEW WELDON RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP WITH 0:00 - 12:00 12.00 DRLSUR 02 **FULL RETURNS 1890'** RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP WITH 12.00 DRLSUR 02 12:00 - 0:00 **FULL RETURNS 2130'** 12/12/2007 SUPERVISOR: LEW WELDON RIG T/D @ 2160' CONDITION HOLE 2 HR FULL RETURNS 0:00 - 4:00 4.00 DRLSUR 02 - 7:00 Ρ TRIP DP OUT OF HOLE 3.00 DRLSUR 05 4:00

5/19/2008 2:23:24PM

7:00

- 10:30

3.50

DRLSUR

11

Р

RIG

WINS No.: 95378

RUN 2119' OF 9 5/8 CSG AND 200' OF 1" PIPE RIG DOWN AIR

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1.1110

. 11.210-

Start Date: 11/13/2007

Wins No.: 9			NT ACTIVI			22-13O	<u>-1CS</u>	API No.: 43047394		
EVENT INFOR	INATION:		ECTIVE: D					DATE WELL STARTED/RESUMED:		
			ECTIVE2:					Event End Status: COMPLETE		
RIG OPERATION	ONS:	Begir	n Mobilizatio	n Rig On I	Location	Rig Ch	arges	Rig Operation Start Finish Drilling Rig Release Rig Off Local		
PETE MARTIN	DRILLING	/1 1	1/13/2007	11/13	/2007	11/13/	2007	11/13/2007 11/27/200		
Date	Tin Start	ne End	Duration (hr)	Phase	Code	Subco de	P/U	Operation		
	10:30		1.50	DRLSUR	15	ue	P	CEMENT 1ST STAGE WITH 200 SKS LEAD @ 11# 3.82 23		
	12:00	- 12:30	0.50	DRLSUR	15		Р	GAL/SK AND 200 SKS TAIL @ 15.8# 1.15 5.0 GAL/SK RETURN 120 BBL INTO DISPLACEMENT NO LEAD CMT TO SURFACE 1ST TOP JOB 125 SKS DOWN 1" PIPE NO CMT TO SURFACE		
	12:30	- 14:00	1.50	DRLSUR	15		Р	WOC 2ND TOP JOB 125 SKS DOWN BS GOOD CMT TO SURFACE AND STAYED AT SURFACE		
	14:00	- 0:00	10.00	DRLSUR	12		Р	NO VISIBLE LEAKS WORT		
1/30/2008			* <u>************************************</u>							
SUPERVISOR	· SID ARI	MSTRO!	NG							
-51.0000		- 22:00	22.00	DRLPRO	01	С	Р	R/D & SKID RIG & R/U		
	22:00	- 0:00	2.00	DRLPRO	13	Α	Р	NIPPLE UP B.O.P'S		
1/31/2008										
SUPERVISOR	: SID ARI	MSTRO	NG							
		- 4:00	4.00	DRLPRO	13	С	Р	TEST B.O.P'S		
	4:00	- 15:00	11.00	DRLPRO	05	Α	Р	INSTALL WEAR BUSHING & P/U MOTOR & DIR TOOLS &		
	15:00	- 17:00	2.00	DRLPRO	02	F	Р	INSPECT BHA. DRLG CEMENT & F.E EQUIPMENT & TAG CEMENT @ 1970		
	17:00		7.00	DRLPRO	02	D	Р	DRLG & SURVEY F/ 2160 TO 2629 - ( 469' . FPH 67.0 ) WT 8.7.		
2/1/2009					_					
2/1/2008		MOTDO	NO							
SUPERVISOR		MSTRO - 10:00	NG 10.00	DRLPRO	02	D	Р	DRLG & SURVEY F/ 2629 TO 3150 - 521' @ 52.1 FPH WT 9.4'		
								36		
	10:00	- 0:00	14.00	DRLPRO	07	В	Z	WORK ON MUD PUMPS ( NOTE: T.O.H TO CASING SHOE )		
2/2/2008										
SUPERVISOR	R: SID AR	MSTRO	NG							
		- 23:30	23.50	DRLPRO	07	В	Z	REPAIR MUD PUMPS & T.I.H & WASH TO BTM 60' ( NO FILL )		
	23:30	- 0:00	0.50	DRLPRO	02	D	Р	DRILL & SURVEY F/ 3150 TO 3170 = 20' FHP 40' W/ 9.5/ 45		
2/3/2008	-									
SUPERVISOR	R: SID AR	MSTRO	NG							
	0:00	- 13:30	13.50	DRLPRO	02	D	Р	DRILL & SURVEY F/ 3,170 TO 3,727 - 557' @ 41.2 FPH W/ 9.7		
	13:30	- 14:00	0.50	DRLPRO	06	Α	Р	SER RIG		
	14:00	- 0:00	10.00	DRLPRO	02	D	Р	DRILL & SURVEY F/ 3,727 TO 4106 - 379' @ 37.9 FPH W/ 9.7		
								42		
2/4/2008										
SUPERVISOF				מין מין	00	D	Р	DRILL - SURVEY F/ 4106 TO 4589 - 483' @ 34.5 FPH W/ 9.9/4:		
		- 14:00 - 14:30	14.00 0.50	DRLPRO DRLPRO		A	P	SER RIG		
	14:00		9.50	DRLPRO		D	Р	DRILL - SURVEY F/ 4589 TO 4920 -331' @ 34.8 FPH W/ 10.0 /		
0/5/0000					_					
2/5/2008			NC			•				
SUPERVISOF	-	- 15:00	15.00	DRLPRO	02	D	Р	DRILL & SURVEY F/ 4920 TO 5393 - 473' @ 31.5 FPH W/ 10.0 PPG VIS 42		
	15:00	- 15:30	0.50	DRLPRO	06	Α	Р	SER RIG		
	15:30	- 0:00	8.50	DRLPRO	02	D	Р	DRILL & SURVEY F/ 5393 TO 5605 - 212' @ 24.9 FPH W/ 10.1 PPG VIS 42		
0/6/0000										
2/6/2008										
SUPERVISOR	K: SID AF	MSTRC	NG ———							

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Wins No.: 95	378				BU 102	2-130	-1CS			API No.:	4304739476
EVENT INFOR			NT ACTIVIT					REASON:		DECUMED.	ı
			ECTIVE: DI ECTIVE2:	EVELOPME	ENT			Event End	LL STARTED/F Status: COMP	LETE	
RIG OPERATIO	NS:	Begir	n Mobilizatio	n Rig On I	ocation	Rig Ch	narges	Rig Operation Start	Finish Drilling	Rig Release	Rig Off Location
PETE MARTIN D	RILLING /	1 1	1/13/2007	11/13	/2007	11/13	/2007	11/13/2007			11/27/2007
Date	Tim Start-	7	Duration (hr)	Phase	Code	Subco de	P/U		Opera		
		15:00		DRLPRO	02	D	Р	DRILL & SURVEY F/ PPG VIS 42	' 5605 TO 6244	l <b>-</b> 639' @ 42.6	FPH W/ 10.1
	15:00 - 15:30 -	15:30 0:00		DRLPRO DRLPRO	06 02	A D	P P	SER RIG DRILL & SURVEY FA MUD WT VIS 43	6244 TO 6480	) - 236' @ 27.9	FPH W/ 10.2
					-	-		WOD WY VIO 40			
SUPERVISOR:	SIDARN	/STROI	NG								
OO! EITVIOO!	0:00 -			DRLPRO	02	D	Р	DRILL & SURVEY F	/ 6480 TO 6753	3 273' @ 22.75	FPH W/ 10.2
	12:00 -		8.50	DRLPRO	05	Α	Р	PPG VIS42 T.F.N.B & C/O MUD	MOTOR & CH	ECK MWD TO	OLS & WASH 75'
	20:30 -	0:00	3.50	DRLPRO	02	D	Р	TO BTM DRILL & SURVEY F	/ 6753 TO 6848	8 - 95 @ 27.1 F	PH W/ 10.3 PPG
2/8/2008								VIO 40_	· <u> </u>		···
SUPERVISOR:	SID ARM	/ISTROI	NG								
	0:00	- 15:00	15.00	DRLPRO	02	D	Р	DRLG 6848-7326 =	478' = 31.9 FPI	H 10.6 / 45	
	15:00	- 15:30	0.50	DRLPRO	06	Α	Р	RIG SERVICE			
	15:30 -	- 0:00	8.50	DRLPRO	02	D	Р	DRLG 7326-7531= 2	206' = 24.3 FPH	i, MW 11.2 / 43	3
2/9/2008											
SUPERVISOR:	SID ARI	MSTRO	NG								
OUI ERVIOUR.		- 1:00	1.00	DRLPRO	02	D	Р	DRILL & SURVEY F	7 7531 TO 758	1 - 50' @ 50.0 F	PH W/ 11.2 PPG
							_	VIS 42			
		- 3:30	2.50	DRLPRO	04	A	P	CIRC & WORK ON		ALAZO CONTOLIT	OD CINCAL E
	3:30	- 8:30	5.00	DRLPRO	05	I	Ρ	T.O.H F/ MWD TO 3 TOOLS RECORRLA EVERY 500' TO BT	ATED TOOLS 8	& T.I.H & CHEC	CK TOOLD
	8:30	- 14:30	6.00	DRLPRO	02	D	Р	DRILL & SURVEY F PPG VIS 42		1 - 190' @ 31.6	FPH W/ 11.2
	14:30	- 15:00	0.50	DRLPRO	06	Α	Р	SER RIG			
	15:00	- 0:00	9.00	DRLPRO	02	D	Р	DRILL & SURVEY F PPG VIS 42	7771 TO 801	0 - 210 @ 26.5 	FPH W/ 11.4
2/10/2008											
SUPERVISOR										0 0001 0 05	, EDUNA 44 4
	0:00		15.50	DRLPRO	02	D	Р	DRILL & SURVEY F PPG VIS43 SER RIG	F/ 8010 TO 840	9 - 339' @ 25.7	FPH VV/ 11.4
	15:30 16:00		0.50 2.00	DRLPRO DRLPRO	06 02	A D	P P	DRILL & SURVEY F	-/ 8409 TO 844	1 - 32' @ 16.0	FPH W/ 11.4 PPG
	10.00	- 10.00	۷.00					VIS 43			
	18:00		0.50	DRLPRO		A	Z	REPAIR RIG #2 CL			DEDLIAN 44 4 1/10
	18:30		5.00	DRLPRO		D	Р	DRILL & SURVEY I 43 CIRC & COND F/ S		0 - 119 @ 23.8	3 FPH VV/ 11.4 VIS
	23:30	- 0:00	0.50	DRLPRO	04	С	Р	CIRC & COND F/ 5	HONT HAP		
2/11/2008	-										
SUPERVISOR							_	0100 DT11110			
		- 0:30	0.50	DRLPRO		Α	P	CIRC BTM UP	TANDO		
		- 4:00	3.50	DRLPRO		E	Р	SHORT TRIP 30 ST	I AND		
		- 5:00	1.00	DRLPRO		A	P	CIRC BTM UP T.O.H F/ LOGS			
		- 10:00		DRLPRO		B F	P P	R/U BAKER ATLAS	SWIRFI INF &	RUN TRIPI F	COMBO
	10:00	- 17:00	7.00	DRLPRO	08	r	٣	LOGGERS DEPTH LOC. )	l @ 8,554 ( BAI	KER LATE 1 HI	R GETTING TO
	17:00	- 18:00	1.00	DRLPRC	05	Α	Р	T.I.H TO CASING			
1	18:00	- 19:30	1.50	DRLPRC	06	D	Р	SLIP & CUT DRLG	LINE		

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<b>EVENT INFO</b>	RMATIO	N: EVI	ENT ACTIVI	TY: DRILLI	NG			REASON:
		ОВ	JECTIVE: D	EVELOPM	ENT			DATE WELL STARTED/RESUMED:
		ОВ	JECTIVE2:					Event End Status: COMPLETE
RIG OPERAT	IONS:	Beg	in Mobilizatio	on Rig On	Location	Rig C	harges	Rig Operation Start Finish Drilling Rig Release Rig Off Location
PETE MARTIN	DRILLIN	G/I	11/13/2007	11/13	3/2007	11/13	3/2007	11/13/2007 11/27/2007
Date	Sta	Time art-End	Duration (hr)	Phase		Subco de	P/U	Operation
	19:30	- 23:30	4.00	DRLPRO	05	Α	Р	CONT. T.I.H & WASH 90' TO BTM
	23:30	- 0:00	0.50	DRLPRO	04	Α	Р	CIRC BTM UP
2/12/2008								
SUPERVISOR	R: SID A	RMSTRO	NG					
	0:00	- 1:30	1.50	DRLPRO	04	Α	Р	CIRC & COND
	1:30	- 11:00	9.50	DRLPRO	05	Α	Р	L/D D.P. & RACK BACK BHA.
	11:00	- 18:30	7.50	DRLPRO	11	Α	Р	R/U CASING CREW & RUN 4 1/2 PROD. STRING
	18:30	- 20:30	2.00	DRLPRO	04	Α	Р	R/U CEMENT HEAD & CIRC BTM UP
	20:30	- 23:00	2.50	DRLPRO	15	Α	Р	HELD SAFETY METTING & R/U BJ & TESTED LINES 4500 PSI & PUMPED 20 BBLS MUD CLEAN & F/ SCAV CMT 20 SKS - 9.5 PPG W/ YIELD 8.45 & F/ LEAD 310 SKS - 11.0 PPG W/ YIELD 3.38 F/ TAIL 1250 SKS - 14.3 W/ YIELD 1.31 & DROP PLUG & DISPLACED W/ 132.2 BBLS WATER BUMP PLUG W/ 500 OVER FINAL CIRC OF 2594 & PLUG HELD & GOT BACK 22.0 BBLS LEAD CMT TO PIT.
	23:00	- 0:00	1.00	DRLPRO	13	A _	Р	NIPPLE DOWN B.O.P'S & SET SLIPS W/ 75 STRING WT & CUT 4 1/2 CASING OFF.
2/13/2008	ı					-		
SUPERVISOR	R: SID A	RMSTRC	NG					
	0:00	- 1:00	1.00	DRLPRO	13	Α	Р	FINISH NIPPLE DOWN
	1:00	- 5:00	4.00	DRLPRO	01	Ε	Р	WASH & CLEAN OUT MUD TANKS
	5:00	- 0:00	19.00	DRLPRO	01	E	Р	R/D RIG PREPAIR F/ SKID & RELEASED RIG @ 05:00 O'CLOCK ON 2/13/2008

Start Date: 5/5/2008 WINS No.: 95378 NBU 1022-130-1CS **End Date: Operation Summary Report** AFE No.: 2008169 SPUD DATE ROUTE KR FIELD NAME Operator 5310 NATURAL BUTTES 11/13/07 5,293 KERR-MCGEE OIL & GAS ONSHORE LP API STATE DIVISION COUNTY ROCKIES UINTAH LITAH 4304739476 /13/10S/22E Footages: 1,747.00' FSL 1,705.00' FWL Lat./Long.: Lat./Long.: 39.94644 / -109.39151 Q-Q/Sect/Town/Range: PBMD PBTVD LOG MD TVD MTD 8508 ลกลด REASON: WHR PAD#1 - MV **EVENT ACTIVITY: COMPLETION EVENT INFORMATION:** DATE WELL STARTED/RESUMED: OBJECTIVE: DEVELOPMENT **Event End Status:** OBJECTIVE2: ORIGINAL Rig Off Location Rig Operation Start Finish Drilling Rig Release Begin Mobilization Rig On Location Rig Charges **RIG OPERATIONS:** Operation P/U Time Duration Phase Code Subco Date de Start-End (hr) 5/5/2008 SUPERVISOR: DOUG CHIVERS HSM. FRACING & PERFORATING 48 Р - 7:30 COMP 7:00 0.50 RIH W/ 3 3/8" EXP GNS, 23 GRM, .36 HOLES, 90 & 120 DEG 7:30 - 18:00 10.50 COMP 36 В P PHASING. PERFORATE 8,363' - 69' 4 SPF. 8,286' - 88' 4 SPF. 8,240' - 43' 3 SPF, 41 HOLES. PRIME UP PUMPS & LINES. PRESSURE TEST SURFACE EQUIPMENT TO 8,500 PSI. STG 1) WHP 20 PSI, BRK 3,434 PSI, @ 2.6 BPM, ISIP 2,547 PSI, FG .75. PUMP 100 BBLS @ 50.1 BPM @ 4,500 PSI = 31 OF 41 HOLES OPEN 76%. MP 5,744 PSI, MR 51.7 BPM, AP 4,239 PSI, AR 50 BPM, ISIP 2,715 PSI, FG .77 NPI 168 PSI. PMP 1,244 BBLS SW & 36,349 LBS OF 30/50 SAND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 41,349 LBS. STG 2 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, .36 HOLES, 90 DEG PHASING, SET BAKER 8K CBP @ 8,133' & PERFORATE 8.100' - 03' 4 SPF, 8,055' - 62' 4 SPF 40 HOLES. WHP 100 PSI, BRK 3,222 PSI, @ 3.3 BPM, ISIP 2,388 PSI, FG .74. PUMP 100 BBLS @ 50 BPM @ 5,300 PSI = 25 OF 41 HOLES OPEN 62%. MP 5,385 PSI, MR 50.3 BPM, AP 4,691 PSI, AR 50 BPM, ISIP 2,725 PSI, FG .78 NPI 337 PSI. PMP 798 BBLS OF SLK WATER & 20,487 LBS OF 30/50 SAND & 5 000 LBS OF 20/40 RESIN SND. TOTAL PROP 25,487 LBS. STG 3 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, .36 HOLES, 90 DEG PHASING. SET BAKER 8K CBP @ 7,852' & PERFORATE 7,812' - 22' 4 SPF, 40 HOLES. WHP 0 PSI, BRK 3,492 PSI, @ 3.0 BPM, ISIP 2,727 PSI, FG .75. PUMP 100 BBLS @ 50.2 BPM @ 5,000 PSI = 27 OF 40 HOLES OPEN 68%. MP 5,174 PSI, MR 50.3 BPM, AP 4,682 PSI, AR 50 BPM, ISIP 2,727 PSI, FG .79 NPI 269 PSI. PMP 680 BBLS OF SLK WATER & 15,790 LBS OF 30/50 SAND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 20,790 LBS. STG 4 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, .36

HOLES, 90 DEG PHASING, SET BAKER 8K CBP @ 7,658' &

PUMP A DFIT. WHP 0 PSI, BRK 3444 PSI @ 5.2 BPM, PUMP 24 BBLS. STBILIZED PRESSURE 2,170 PSI @ 5.8 BPM, ISIP 1,952

PERFORATE 7,623' - 28' 4 SPF, 20 HOLES.

FG .69 SWI SDFN engis r

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<u> Vins No.: 95</u>					<u> 18U 10</u>	<u> 22-130</u>	<u> </u>	API No.: 430473	9476
EVENT INFORM	MATION:		T ACTIVIT					REASON: WHR PAD#1 - MV	
			CTIVE: DI CTIVE2: (					DATE WELL STARTED/RESUMED: Event End Status:	
						Dia C	<u></u>		action
IIG OPERATIO	NS:	Begin i	Mobilizatio	n Rig On	Location	Rig C	narges	Rig Operation Start Finish Drilling Rig Release Rig Off Loc	Jatioi
Data	Tin	se v Todo	Duration	Phase	Code	Subco	P/U	Operation	
Date	Start-		(hr)	i liase	Code	de	170	Alexander of Application	
/6/2008									
SUPERVISOR:							_		
	7:00 -		0.50	COMP	48		Р	HSM. FRACING & PERFORATING	20
	7:30 -	17:00	9.50	COMP	36	В	Р	STG 4 ) RIH W/ 3 3/8" EXP GNS, 23 GRM, .36 HOLES, 90 & 12 DEG PHASING, PERFORATE 7,623' - 28' 4 SPF, 7,588' - 92' 3 SPF, 7,535' - 37' 3 SPF, 38 HOLES.	3
								WHP 1,120 PSI, BRK 2,614 PSI, @ 4.9 BPM, ISIP 1,952 PSI, F .76. PUMP 100 BBLS @ 50.4 BPM @ 4,000 PSI = 30 OF 48 HOLES	
								OPEN 78%. MP 5,742 PSI, MR 50.6 BPM, AP 4,314 PSI, AR 50.3 BPM, ISI	
								2,565 PSI, FG .78 NPI 613 PSI. PMP 2,626 BBLS OF SLK WATER & 93,692 LBS OF 30/50 SA & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 98,692 LB:	
								STG 5 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, 3 HOLES, 90 120 & 180 DEG PHASING. SET BAKER 8K CBP @	
								7,491' & PERFORATE 7,458' - 61' 4 SPF, 7,446' - 50' 4 SPF, 7 - 26' 3 SPF, 7,398' - 02' 2 SPF, 42 HOLES.	,424
								WHP 800 PSI, BRK 3133 PSI, @ 2.9 BPM, ISIP 1698 PSI, FG PUMP 100 BBLS @ 50.5 BPM @ 4,300 PSI = 42 OF 42 HOLE OPEN 100%.	
								MP 4565 PSI, MR 50.8 BPM, AP 4139 PSI, AR 50 BPM, ISIP 2 PSI, FG .81 NPI 215 PSI. PMP 2,662 BBLS OF SLK WATER & 94,085 LBS OF 30/50 SA	AND
								& 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 99,085 LB STG 6 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, .3	
								HOLEŚ, 90 120 & 180 DEG PHASING. SET BAKER 8K CBP (7,326' & PERFORATE 7,290' - 96' 4 SPF, 7,176' - 79' 3 SPF, 7 - 61' 2 SPF, 39 HOLES.	@ 7,158
								WHP 2,015 PSI, BRK 2,644 PSI, @ 2.9 BPM, ISIP 2,099 PSI, .73. PUMP 100 BBLS @ 50 BPM @ 4,250 PSI = 29 OF 39 HOLES	
								OPEN 74%. MP 4,748 PSI, MR 50.3 BPM, AP 4,189 PSI, AR 49.9 BPM, IS	IP
								2,270 PSI, FG .76 NPI 171 PSI. PMP 3,666 BBLS OF SLK WATER & 133,096 LBS OF 30/50 S & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 138,096 L SWI SDFN	
 5/7/2008						-			
SUPERVISOR:	חטוים י	CHIVEDS							
SUPERVISOR.		- 7:30	0.50	COMP	48		Р	HSM. FRACING & PERFORATING	
		- 10:00	2.50	COMP	36	В	P	STG 7 ) PU 4 1/2" CBP & RIH W/ 3 3/8" EXP GNS, 23 GRM, .3 HOLES, 120 DEG PHASING. SET BAKER 8K CBP @ 7,079' 8 PERFORATE 7,042' - 49' 3 SPF, 7,022' - 29' 3 SPF, 42 HOLE WHP 330 PSI, BRK 2,704 PSI, @ 1.0 BPM, ISIP 1,934 PSI, FPUMP 100 BBLS @ 50 BPM @ 3,800 PSI = 33 OF 42 HOLES	& ES. G .71
								OPEN 79%. MP 4,647 PSI, MR 50.3 BPM, AP 3,800 PSI, AR 49.9 BPM, IS 2,373 PSI, FG .78 NPI 439 PSI. PMP 2,482 BBLS OF SLK WATER & 87,070 LBS OF 30/50 S. & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 92,070 LE	AND
								KILL PLG ) PU & RIH W/ 4 1/2' 8K BAKER CBP & SET @ 6,9 STIM COMPLETE SWI. WAIT ON DRILL OUT	72'
5/15/2008									
SUPERVISOR	DOUG	CHIVERS	;						
		- 7:30	0.50	COMP	48		Р	DAY 4 - JSA & SM #4	

mont frigue mont guide no de filipe no de Sala no de Sa

/ins No.: 95378 VENT INFORMATION:	EVENT ACTIVITY OBJECTIVE: DE	TO COMPLETION VELOPMENT	22-130-1CS	DATE WE	: WHR PAD#1 - ELL STARTED/R	MV	4304739476
IG OPERATIONS:	OBJECTIVE2: O	RIGINAL Rig On Location	Rig Charges	Event End Rig Operation Start		Rig Release	Rig Off Location
G OF EKATIONS.							
Date Time Start-Er		Phase Code	Subco P/U		Operat		
7:30 - 7		COMP 30	A P	RDMO NBU 1022-13 SPOT EQUIP. & RU VALVES, NUBOP. TBG.	RIG. OPEN W	ELL, 0 PSI. NI	D FRAC
				P/U 3 7/8" BIT, POE TBG. TAG FILL @ 0 3000 PSI. EST. CIF	6940'. R/U PWF	R SWVL & PMF	P. P.T. BOP TO
				CBP #1) DRLG OU DIFF. PSI. RIH, TAG PSI.	T BAKER 8K CI G SND @ 7049'.	3P @ 6970' IN : . C/O 30' OF S	8 MIN. 200 LBS ND. FCP = 100
				CBP #2) DRLG OU DIFF. PSI. RIH, TA PSI.	T BAKER 8K CI G SND @ 7296'	3P @ 7079' IN . C/O 30' OF S	8 MIN. 300 LBS ND. FCP = 175
				CBP #3) DRLG OU LBS DIFF. PSI. RIF 200 PSI.	T BAKER 8K CI I, TAG SND @ 7	BP @ 7326' IN 7461'. C/O 30'	10 MIN. 200 OF SND. FCP=
				CBP #4) DRLG OU DIFF. PSI. RIH, TA PSI.	IT BAKER 8K C G SND @ 7628'	BP @ 7491' IN . C/O 30' OF S	8 MIN. 200 LBS ND. FCP = 250
				CBP #5) DRLG OU DIFF. PSI. RIH, TA PSI.	IT BAKER 8K C G SND @ 7822'	BP @ 7658' IN . C/O 30' OF S	8 MIN. 200 LBS ND. FCP =350
				CBP #6) DRLG OL LBS DIFF. PSI. RIF 350 PSI.	IT BAKER 8K C I, TAG SND @	BP @ 7852' IN 8103'. C/O 30'	10 MIN. 200 OF SND. FCP =
				CBP #7) DRLG OL DIFF. PSI. RIH, TA PSI.	JT BAKER 8K C .G SND @ 8451	BP @ 8133' IN '. C/O 32' OF S	8 MIN. 200 LBS SND. FCP = 400
				POOH & L/D 15 JT TBG ON HANGER 7993.71' + POBS 8	W/254 JTS NEV	V 2 3/8" L80 TE	OTAL). LAND 3G. EOT @
				R/D FLOOR & TBG OFF BIT @ 1200 P	SEQUIP. NDBO SI. WAIT 30 MI	OP, DROP BAL N. FOR BIT TO	L, NUWH. PMP FALL TO BTM.
				18:30 TURN WELI 000 PSI. 12778 BI	L OVER TO FBO BLS LTR.	C. SICP = 1250	00 PSI. FTP =
				18:30 SDFN-PRE	P TO RDMO IN	AM.	
5/17/2008							
SUPERVISOR: DOUG CH	HIVERS	PROD		TURN WELL TO S CP 3000#, CK 20/6	ALES @ 1400 H	IR ON 5/17/200	98 - FTP 1200#,

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#### FORM 8 STATE OF UTAH AMENDED REPORT ... DEPARTMENT OF NATURAL RESOURCES (highlight changes) 5. LEASE DESIGNATION AND SERIAL NUMBER: DIVISION OF OIL, GAS AND MINING STUO-08512-ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 7. UNIT or CA AGREEMENT NAME 1a. TYPE OF WELL: UNIT #891008900A 8. WELL NAME and NUMBER: b. TYPE OF WORK: WELL RE-ENTRY DIFF. RESVR. NBU 1022-1301CS OTHER 9. API NUMBER: 2 NAME OF OPERATOR KERR McGEE OIL & GAS ONSHORE LP 4304739476 10 FIELD AND POOL, OR WILDCAT 3. ADDRESS OF OPERATOR: PHONE NUMBER: **NATURAL BUTTES** STATE UT ZIP 84078 1368 S 1200 E CITY VERNAL (435) 781-7024 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: 4. LOCATION OF WELL (FOOTAGES) per DKD review AT SURFACE: 1747'FSL, 1705'FWL NESW 13 10S 22E AT TOP PRODUCING INTERVAL REPORTED BELOW: 12. COUNTY AT TOTAL DEPTH: \*775'FSL, 1920'FEL (SW/SE) 797 FS1 1879 Fe UTAH **UINTAH** 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): 14. DATE SPUDDED: ABANDONED READY TO PRODUCE 🗸 11/13/2007 2/10/2008 5/16/2008 5292'GL 18. TOTAL DEPTH: MD 8,560 19. PLUG BACK T.D.: MD 8,519 20. IF MULTIPLE COMPLETIONS, HOW MANY? 21. DEPTH BRIDGE MD PLUG SET: TVD 8,141 TVD 8,100 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) WAS WELL CORED? YES (Submit analysis) CBL-CCL-GR, COMP 2, CD, CN, Cal, HDI, BPL ио 🔽 YES -WAS DST RUN? (Submit report) YES 🔽 DIRECTIONAL SURVEY? NO L (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER CEMENT TYPE & SLURRY AMOUNT PULLED SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* HOLE SIZE VOLUME (BBL) DEPTH NO OF SACKS 20" 28 14" STL 36.7# 40 36# 12 1/4" 9 5/8 J-55 2,160 650 7 7/8" 4 1/2 8,560 1560 I-80 11.6# 25. TUBING RECORD DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) DEPTH SET (MD) PACKER SET (MD) 7,994 2 3/8" 27. PERFORATION RECORD 26. PRODUCING INTERVALS PERFORATION STATUS INTERVAL (Top/Bot - MD) SIZE NO. HOLES TOP (TVD) BOTTOM (TVD) FORMATION NAME TOP (MD) BOTTOM (MD) 7,022 8.369 0.36 283 Squeezed Open (A) MESAVERDE 7,022 8,369 Open Saueezed (B) NSMVL Squeezed (C) Squeezed Open (D) 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND TYPE OF MATERIAL PMP 14.158 BBLS SLICK H2O & 515,569# 30/50 SD 7022'-8369' 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ✓ DIRECTIONAL SURVEY ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT PROD CORE ANALYSIS SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION

(CONTINUED ON BACK)

(5/2000)

JUN 1-8 2008

#### 31. INITIAL PRODUCTION

#### INTERVAL A (As shown in item #26)

31. INITIAL PRO	DOCTION				INT	ERVAL A (AS SHO	wn in item #20)				
DATE FIRST PRO	ODUCED:	TEST DA	TE:		HOURS TESTED	);	TEST PRODUCTION	OIL - BBL:	GAS - MCF:	WATER - BBL	: PROD. METHOD;
5/16/2008	}	5/28/	2008		2	24	RATES: →	0	1,378	408	FLOWING
CHOKE SIZE:	TBG. PRESS		1	RAVITY	BTU ~ GAS	GAS/OIL RATIO	24 HR PRODUCTION	OIL BBL:	GAS - MCF:	WATER - BBL	
24/64	775	1,35	50				RATES: →	0	1,378	408	PROD
					INT	ERVAL B (As sho	wn in item #26)				
DATE FIRST PRO	ODUCED:	TEST DA	TE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	. CSG. PRE	ESS. API GF	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL	: INTERVAL STATUS:
					INTI	ERVAL C (As sho	wn in item #26)			*	•
DATE FIRST PRO	ODUCED:	TEST DA	TE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	. CSG. PRE	ESS. API GF	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER BBL	: INTERVAL STATUS:
					INTI	ERVAL D (As show	wn in item #26)				
DATE FIRST PRO	ODUCED:	TEST DA	ΓE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL – BBL:	GAS MCF:	WATER - BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	. CSG, PRE	ESS. API GF	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL	; INTERVAL STATUS:
32. DISPOSITIO SOLD	N OF GAS (So	old, Used for F	uel, Vented, Et	;.)		•			_ <b>.</b>	<u> </u>	•
33. SUMMARY (	OF POROUS Z	ONES (Include	Aquifers):				34	. FORMATION	(Log) MARKERS:		
Show all importar tested, cushion us						tests, including de	pth interval				
Formatio	n	Top (MD)	Bottom (MD)		Descript	ions, Contents, etc			Name		Top (Measured Depth)

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
WASATCH MESAVERDE	4,144 6,513	6,513			

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) SHEILA UPCHEGO

TITLE SENIOR LAND ADMIN SPECIALIST

SIGNATURE

DATE 6/16/2008

This report must be submitted within 30 days of

- completing or plugging a new well
- · drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

<sup>\*\*</sup> ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).



# **Drilling Services**

# Completion



## **ANADARKO - KERR McGEE**

NBU#1022-1301CS

**UINTAH COUNTY, UTAH** 

WELL FILE: 4013598C

DATE: FEBRUARY 14, 2008

#### Weatherford International, Ltd.

15710 John F. Kennedy Blvd Houston, Texas 77032 USA +1.281.260.1300 Main +1.281.260.4730 Fax www.weatherford.com



750

1500

2250

3000

3750

4500

5250

6000

6750

7500

8250

9000 -750 LASTSVY

1500

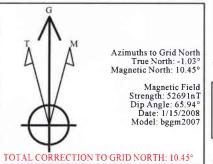
750

Vertical Section at 118,79° [1500ft/in]

True Vertical Depth [1500ft/in]

#### KERR MCGEE OIL & GAS NBU #1022-1301CS UINTAH COUNTY, UTAH





			WEL	L DETAILS			
Name	+N/-S	+E/•W	Northing	Easting	Latitude	Longitude	Slot
Well #13O1CS	0.00	0.00	14510600.00	2091358.20	39°56'47.113N	109°23'28.047W	N/A

TARGET DETAILS Name TVD +N/-S  $\pm E/-W$ Easting Shape PBHL 8130.00 -929 26 1690.97 14509670.74 2093049.17 Circle (Radius: 100)

FORMATION TOP DETAILS No. TVDPath MDPath Formation 4093.58 6590.50 WASATCH ME\$AVERDE 6186 00

FIELD DETAILS

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27) Geodetic System:

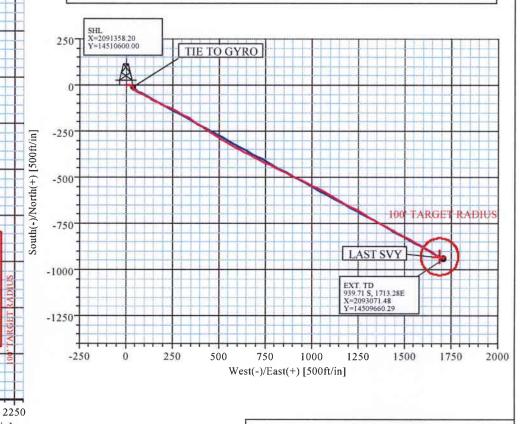
Universal Transverse Mercator (USfeet) NAD27 (Clarke 1866) UTM Zone 12, North 114W to 108W bggm2007 Ellipsoid: Zone: Magnetic Model:

System Datum: Mean Sea Level Grid North Local North:

CASING DETAILS No. TVD MD Name Size 2118.08 9 5/8" 2119.00 9.62

LEGEND Well #1301CS,1,GYRO SVY Well #1301CS,1,Plan #2 WFT SVY KB = 5308'GR = 5293'TIE TO GYRO

			Last Si	irvey & Ext t	o TD: WFT S	VY (Well #13	O1CS/1)		
No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
LAST	8508.00	1.25	112.52	8088.67	-939.28	1712.24	0.23	134.14	1952.94
TD	8560.00	1.25	112.52	8140.66	-939.71	1713.28	0.00	0.00	1954.07



Survey: WFT SVY (Well #1301CS/1)

Created By: Russell Joyner Date: 2/14/2008



## Weatherford **SURVEY REPORT - GEOGRAPHIC**



Anadarko-Kerr-McGee Company:

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27) Field: Site: NBU 1022-1301CS

Well #1301CS Well:

Wellpath: 1

2/14/2008 Date:

Co-ordinate(NE) Reference: Vertical (TVD) Reference:

Section (VS) Reference: Survey Calculation Method: Site: NBU 1022-13O1CS, Grid North

SITE 5308.0

Time: 14:46:34

Well (0.00N,0.00E,118.79Azi)

Minimum Curvature

Db: Sybase

Survey: WFT SVY

WEATHERFORD DRILLING SERVICES Company:

MWD;MWD - Standard

Start Date:

Engineer: Tied-to:

2/4/2008

RUSSELL JOYNER From: GYRO SVY

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)

Map System:Universal Transverse Mercator (USfeet)

Geo Datum: NAD27 (Clarke 1866)

Sys Datum: Mean Sea Level

Map Zone:

UTM Zone 12, North 114W to 108W

Coordinate System: Geomagnetic Model: Site Centre bggm2007

Site:

Field:

NBU 1022-1301CS

Site Position: From: Мар

Ground Level:

Wellpath: 1

Easting:

Northing: 14510600.00 ft 2091358.20 ft

Height 5308.00 ft

ft

0.00

Latitude:

39 56 47.113 N 109

Longitude: North Reference: 23 28.047 W Grid

**Grid Convergence:** 

1.03 deg

Well: Well #1301CS

Position Uncertainty:

Well Position:

+N/-S +E/-W 0.00 ft Northing: 0.00 ft Easting:

14510600.00 ft 2091358.20 ft

Slot Name: Latitude: Longitude:

39 56 47.113 N 23 28.047 W

Position Uncertainty:

0.00 ft

0.00 ft

5293.00 ft

**Drilled From:** Tie-on Depth: Above System Datum:

Surface 0.00 ft

118.79

SITE **Current Datum:** Magnetic Data: 1/15/2008 52691 nT Field Strength:

Depth From (TVD) Vertical Section:

ft

0.00

+N/-S

Declination: Mag Dip Angle: +E/-W

ft

0.00

Mean Sea Level 11.48 deg 65.94 deg

Direction deg

Survey

	MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comme
١	2000.00	2.00	182.86	1999.16	-9.05	37.37	0.00	37.11	14510590.95	2091395.57	TIE TO GYRO
ı	2166.00	2.38	173.51	2165.04	-15.36	37.61	0.31	40.36	14510584.64	2091395.81	
ı	2225.00	2.50	174.98	2223.99	-17.86	37.86	0.23	41.79	14510582.14	2091396.06	
ı	2287.00	2.81	152.98	2285.92	-20.56	38.67	<sup>*</sup> 1.71	43.80	14510579.44	2091396.87	
l	2348.00	4.31	128.61	2346.81	-23.33	41.14	3.44	47.29	14510576.67	2091399.34	
l	2410.00	6.81	120.73	2408.51	-26.66	46.13	4.21	53.26	14510573.34	2091404.33	
ı	2472.00	8.38	119.86	2469.97	-30.79	53.20	2.54	61.45	14510569.21	2091411.40	
ı	2533.00	10.50	117.61	2530.14	-35.58	61.98	3.53	71.46	14510564.42	2091420.18	
ı	2595.00	11.63	116.11	2590.98	-40.95	72.60	1.88	83.35	14510559.05	2091430.80	
	2657.00	13.00	114.61	2651.56	-46.60	84.56	2.27	96.55	14510553.40	2091442.76	
	2719.00	14.44	115.36	2711.78	-52.82	97.88	2.34	111.22	14510547.18	2091456.08	
	2780.00	15.13	120.98	2770.77	-60.17	111.58	2.61	126.77	14510539.83	2091469.78	
ı	2842.00	15.56	121.48	2830.56	-68.68	125.61	0.73	143.16	14510531.32	2091483.81	
	2904.00	16.75	120.23	2890.11	-77.52	140.42	2.00	160.40	14510522.48	2091498.62	
	2965.00	18.00	118.48	2948.32	-86.44	156.30	2.22	178.61	14510513.56	2091514.50	
	3026.00	19.13	117.73	3006.15	-95.59	173.43	1.89	198.03	14510504.41	2091531.63	
ı	3088.00	20.44	113.48	3064.49	-104.63	192.36	3.14	218.97	14510495.37	2091550.56	
ı	3150.00	20.94	112.36	3122.49	-113.16	212.53	1.03	240.76	14510486.84	2091570.73	
	3210.00	22.38	112.11	3178.25	-121.53	233.03	2.40	262.76	14510478.47	2091591.23	
	3272.00	22.63	116.61	3235.54	-131.32	254.63	2.81	286.40	14510468.68	2091612.83	
ı	3334.00	21.94	120.61	3292.91	-142.56	275.27	2.69	309.90	14510457.44	2091633.47	
ı	3428.00	22.44	119.73	3379.95	-160.40	305.96	0.64	345.39	14510439.60	2091664.16	
1	3521.00	25.31	118.86	3464.98	-178.80	338.79	3.11	383.03	14510421.20	2091696.99	
I	3614.00	26.19	125.86	3548.76	-200.43	372.84	3.40	423.28	14510399.57	2091731.04	



## Weatherford **SURVEY REPORT - GEOGRAPHIC**



Company: Anadarko-Kerr-McGee

UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27) NBU 1022-1301CS

Site: Well #1301CS Well:

Wellpath: 1

Date: 2/14/2008 Time: 14:46:34

Site: NBU 1022-13O1CS, Grid North SITE 5308.0 Co-ordinate(NE) Reference:

Vertical (TVD) Reference:

Section (VS) Reference: Well (0.00N,0.00E,118.79Azi)

Survey Calculation Method: Minimum Curvature Db: Sybase

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	
3706.00	28.38	122.86	3630.53	-224.19	407.67	2.81	465.25	14510375.81	2091765.87	
3799.00	33.39	125.69	3710.32	-251.13	447.05	5.61	512.73	14510348.87	2091805.25	
3891.00	29.44	120.48	3788.83	-277.38	487.12	5.21	560.49	14510322.62	2091845.32	
3982.00	30.75	118.48	3867.56	-299.82	526.84	1.81	606.11	14510300.18	2091885.04	
4044.00	31.56	119.73	3920.62	-315.42	554.86	1.67	638.18	14510284.58	2091913.06	
4106.00	30.81	119.73	3973.66	-331.34	582.74	1.21	670.28	14510268.66	2091940.94	
1167.00	30.31	119.23	4026.19	-346.61	609.74	0.92	701.30	14510253.39	2091967.94	
4229.00	30.13	118.86	4079.76	-361.76	637.02	0.42	732.50	14510238.24	2091995.22	
4291.00	29.81	117.98	4133.47	-376.50	664.26	0.88	763.47	14510223.50	2092022.46	
351.00	30.44	116.73	4185.37	-390.33	691.00	1.48	793.57	14510209.67	2092049.20	
1414.00	31.88	116.48	4239.28	-404.93	720.15	2.29	826.15	14510195.07	2092078.35	
4476.00	31.25	115.98	4292.11	-419.27	749.26	1.10	858.57	14510180.73	2092107.46	
1537.00	30.82	116.38	4344.37	-433.15	777.49	0.78	889.99	14510166.85	2092135.69	
\$598.00	30.13	116.23	4396.95	-446.86	805.22	1.14	920.89	14510153.14	2092163.42	
4660.00	30.75	115.86	4450.40	-460.65	833.44	1.04	952.27	14510139.35	2092191.64	
1721.00	30.94	116.23	4502.77	-474.38	861.54	0.44	983.51	14510125.62	2092219.74	
1784.00	30.63	115.98	4556.90	-488.57	890.49	0.53	1015.72	14510111.43	2092248.69	
1846.00	30.00	116.11	4610.42	-502.31	918.61	1.02	1046.98	14510097.69	2092276.81	
1908.00	30.63	115.98	4663.94	-516.05	946.73	1.02	1078.23	14510083.95	2092304.93	
1970.00	30.06	116.23	4717.45	-529.83	974.86	0.94	1109.52	14510070.17	2092333.06	
5032.00	31.38	117.36	4770.74	-544.12	1003.12	2.32	1141.17	14510055.88	2092361.32	
5093.00	31.00	118.11	4822.93	-558.82	1031.08	0.89	1172.76	14510041.18	2092389.28	
5156.00	30.13	118.73	4877.17	-574.06	1059.26	1.47	1204.79	14510025.94	2092417.46	
5218.00	29.38	118.86	4931.00	-588.88	1086.22	1.21	1235.56	14510011.12	2092444.42	
280.00	29.50	118.73	4984.99	-603.56	1112.93	0.22	1266.04	14509996.44	2092471.13	
5341.00	29.69	119.73	5038.03	-618.27	1139.22	0.87	1296.16	14509981.73	2092497.42	
5403.00	29.40	120.24	5091.97	-633.55	1165.70	0.62	1326.73	14509966.45	2092523.90	
5465.00	30.38	119.48	5145.73	-648.93	1192.50	1.69	1357.62	14509951.07	2092550.70	
5527.00	29.75	119.73	5199.38	-664.27	1219.50	1.04	1388.68	14509935.73	2092577.70	
5588.00	28.69	119.98	5252.62	-679.10	1245.33	1.75	1418.45	14509920.90	2092603.53	
5651.00	27.06	119.86	5308.31	-693.79	1270.86	2.59	1447.90	14509906.21	2092629.06	
715.00	25.88	119.36	5365.60	-707.89	1295.66	1.88	1476.42	14509892.11	2092653.86	
5779.00	25.19	119.36	5423.35	-721.41	1319.70	1.08	1504.01	14509878.59	2092677.90	
5842.00	24.38	119.11	5480.54	-734.31	1342.75	1.30	1530.41	14509865.69	2092700.95	
5906.00 5969.00	23.13 21.94	119.36 119.63	5539.12 5597.31	-746.90 -758.79	1365.24 1386.26	1.96 1.90	1556.19 1580.34	14509853.10 14509841.21	2092723.44 2092744.46	
3033.00	21.06	119.36	5656.85	-770.34	1406.67	1.38	1603.79	14509829.66	2092764.87	
3096.00	20.31	119.11	5715.79	-781.21	1426.09	1.20	1626.04	14509818.79	2092784.29	
3160.00	19.31	118.48	5776.00	-791.66	1445.10	1.60	1647.73	14509808.34	2092803.30	
3224.00	18.56	118.48	5836.54	-801.56	1463.35	1.17	1668.50	14509798.44	2092821.55	
6288.00	18.06	118.36	5897.30	-811.13	1481.04	0.78	1688.61	14509788.87	2092839.24	
351.00	17.75	118.48	5957.25	-820.35	1498.07	0.50	1707.97	14509779.65	2092856.27	
3414.00	17.50	118.73	6017.29	-829.48	1514.82	0.41	1727.05	14509770.52	2092873.02	
3478.00	17.31	118.61	6078.36	-838.66	1531.61	0.30	1746.19	14509761.34	2092889.81	
3542.00	16.88	119.11	6139.53	-847.74	1548.09	0.71	1765.01	14509752.26	2092906.29	
606.00	16.25	119.61	6200.88	-856.69	1563.99	1.01	1783.25	14509743.31	2092922.19	
669.00	15.25	120.48	6261.51	-865.25	1578.80	1.63	1800.35	14509734.75	2092937.00	
3733.00	14.69	121.36	6323.34	-873.74	1592.98	0.94	1816.87	14509726.26	2092951.18	
3796.00	13.69	119.48	6384.42	-881.56	1606.29	1.75	1832.30	14509718.44	2092964.49	
8860.00	12.56	118.98	6446.74	-888.66	1618.97	1.77	1846.83	14509711.34	2092977.17	
6924.00	11.19	116.48	6509.37	-894.80	1630.62	2.29	1860.00	14509705.20	2092988.82	
987.00	10.00	120.90	6571.30	-900.34	1640.79	2.29	1871.57	14509699.66	2092998.99	



## Weatherford **SURVEY REPORT - GEOGRAPHIC**



Company: Anadarko-Kerr-McGee Field: UINTAH COUNTY, UTAH (UTM Zone 12N-NAD 27)

Site: NBU 1022-1301CS Well #1301CS Well:

Wellpath: 1

Date: 2/14/2008

Section (VS) Reference:

Time: 14:46:34 Co-ordinate(NE) Reference: Vertical (TVD) Reference:

Survey Calculation Method:

Site: NBU 1022-13O1CS, Grid North

SITE 5308.0

Well (0.00N,0.00E,118.79Azi)

Minimum Curvature

Db: Sybase

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	C
7051.00	9.38	124.36	6634.39	-906.14	1649.86	1.33	1882.32	14509693.86	2093008.06	
7115.00	7.56	120.73	6697.69	-911.23	1657.79	2.96	1891.72	14509688.77	2093015.99	
7169.00	6.75	122.11	6751.26	-914.73	1663.53	1.53	1898.44	14509685.27	2093021.73	
7242.00	5.69	128.23	6823.83	-919.25	1670.00	1.71	1906.29	14509680.75	2093028.20	
7306.00	4.56	125.86	6887.58	-922.71	1674.56	1.80	1911.94	14509677.29	2093032.76	
7370.00	3.56	125.23	6951.42	-925.34	1678.24	1.56	1916.44	14509674.66	2093036.44	
7433.00	3.31	115.11	7014.30	-927.24	1681.49	1.04	1920.20	14509672.76	2093039.69	
7498.00	3.13	107.73	7079.20	-928.58	1684.88	0.69	1923.82	14509671.42	2093043.08	
7560.00	3.56	116.36	7141.10	-929.95	1688.21	1.07	1927.40	14509670.05	2093046.41	
7624.00	3.13	138.98	7204.99	-932.15	1691.14	2.15	1931.03	14509667.85	2093049.34	
7687.00	2.44	121.73	7267.92	-934.15	1693.41	1.71	1933.98	14509665.85	2093051.61	
7751.00	1.44	97.98	7331.88	-934.98	1695.37	1.97	1936.09	14509665.02	2093053.57	
7847.00	1.25	88.73	7427.85	-935.13	1697.61	0.30	1938.12	14509664.87	2093055.81	
7942.00	1.50	92.86	7522.83	-935.17	1699.89	0.28	1940.14	14509664.83	2093058.09	
8038.00	1.31	95.11	7618.80	-935.33	1702.23	0.21	1942.28	14509664.67	2093060.43	
8123.00	1.38	109.98	7703.77	-935.76	1704.16	0.42	1944.18	14509664.24	2093062.36	
8229.00	1.38	114.86	7809.74	-936.74	1706.52	0.11	1946.71	14509663.26	2093064.72	-
8325.00	1.19	122.98	7905.72	-937.76	1708.41	0.27	1948.86	14509662.24	2093066.61	
8421.00	1.38	105.98	8001.70	-938.62	1710.35	0.44	1950.98	14509661.38	2093068.55	
8508.00	1.25	112.52	8088.67	-939.28	1712.24	0.23	1952.94	14509660.72	2093070.44	LAST SVY
8560.00	1.25	112.52	8140.66	-939.71	1713.28	0.00	1954.07	14509660.29	2093071.48	EXT. TD

Form	ations
------	--------

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
	0.00	GREEN RIVER		0.00	0.00
4093.58	3963.00	WASATCH		0.00	0.00
6590.50	6186.00	MESAVERDE		0.00	0.00

	STATE OF UTAH		FORM 9	
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST	
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	sals to drill new wells, significantly deepen gged wells, or to drill horizontal laterals. U		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 1022-1301CS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSI		<b>9. API NUMBER:</b> 43047394760000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	<b>PHONE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747 FSL 1705 FWL QTR/QTR, SECTION, TOWNSHI	P PANGE MEDIDIAN		COUNTY: UINTAH	
	Township: 10.0S Range: 22.0E Meridian:	S	STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
✓ SUBSEQUENT REPORT  Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
11/9/2009	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
SPUD REPORT Date of Spud:	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Dute of Spaul	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON	
	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
THIS WELL	MPLETED OPERATIONS. Clearly show all per . RETURNED TO PRODUCTION	ON 11/09/2009.	Accepted by the Utah Division of I, Gas and Mining I, RECORD ONLY IDECEMBER 07, 2009	
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		<b>DATE</b> 12/3/2009		

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST				
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	reenter plugged wells, or to drill horizo		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-1301CS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047394760000						
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	PHONE NUMBER: 7 3779 720 929-	9. FIELD and POOL or WILDCAT:					
4. LOCATION OF WELL FOOTAGES AT SURFACE:		COUNTY: UINTAH					
1747 FSL 1705 FWL QTR/QTR, SECTION, TOWNSI Qtr/Qtr: NESW Section:	dian: S	STATE: UTAH					
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE. REPOR	RT. OR OTHER DATA				
TYPE OF SUBMISSION		·	.,,				
THE OF SOBMISSION							
NOTICE OF INTENT Approximate date work will start:							
1/24/2012	l <u></u>						
SUBSEQUENT REPORT	RY NOTICES AND REPORTS ON WELLS  roposals to drill new wells, significantly deepen existing wells below, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION  TOTAL BUTTER  NATURAL BUTTER  NATURAL BUTTES  8. WELL NAME and NUMI NBU 1022-1301CS  9. API NUMBER: 43047394760000  7. UNIT OF CA AGREEMEIN NATURAL BUTTES COUNTY: 4000000000000000000  9. API NUMBER: 43047394760000  9. API NUM						
Date of Work Completion:							
	l <u></u>		✓ RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	_						
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  The operator requests authorization to recomplete the subject well. The operator requests approval to recomplete the Wasatch formation and commingle with the existing Mesaverde formation. Please see the attached procedure. Thank you.  Approved by the Utah Division of Oil, Gas and Mining  Date: February 02, 2012							
NAME (PLEASE PRINT) Jaime Scharnowske							
SIGNATURE	720 929-6304						
N/A		1/24/2012					

## **Greater Natural Buttes Unit**



## **NBU 1022-1301CS**

RE-COMPLETIONS PROCEDURE

DATE:1/16/2012

AFE#:

API#:4304739476

**USER ID:RACHAPPE** (Frac Invoices Only)

**COMPLETIONS ENGINEER:** Michael Sollee, Denver, CO

(720)-929-6057 (Office) (832)-859-0515 (Cell)

SIGNATURE:

ENGINEERING MANAGER: JEFF DUFRESNE

SIGNATURE:

## REMEMBER SAFETY FIRST!

<u>Name: NBU 1022-1301CS</u>

Location: SW NE SW SE SEC 13 T10S R22E

LAT: 39.946444 LONG: -109.391514 COORDINATE: NAD83 (Surface)

**Uintah County, UT** 

Date: 1/16/2012

**ELEVATIONS:** 5293' GL 5310' KB Frac Registry TVD: 8141

**TOTAL DEPTH:** 8560' **PBTD:** 8459'

**SURFACE CASING:** 9 5/8", 36# J-55 LT&C @ 2137' **PRODUCTION CASING:** 4 1/2", 11.6#, I-80 LT&C @ 8504'

Marker Joint 4036-4058'

#### **TUBULAR PROPERTIES:**

	BURST COLLAPSE		DRIFT DIA.	CAPACITIES		
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)	
2 3/8" 4.7# J-55	7,700	8,100	1.901"	0.00387	0.1624	
tbg						
4 ½" 11.6# I-80	7780	6350	3.875"	0.0155	0.6528	
(See above)						
2 3/8" by 4 ½"				0.0101	0.4227	
Annulus						

TOPS: BOTTOMS:

1045' Green River Top

1302' Bird's Nest Top

1674' Mahogany Top

4139' Wasatch Top 6513' Wasatch Bottom

6513' Mesaverde Top 8560' Mesaverde Bottom (TD)

T.O.C. @ 1635'

### **GENERAL**:

- A minimum of **10** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Bakers Induction-Density-Neutron log dated 2/11/2008
- 3 fracturing stages required for coverage.
- Procedure calls for 4 CBP's (8000 psi).
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 3 gpt (in pad and until 1.25 ppg ramp up is reached) and 10 gpt in all flushes except the final stage. Remember to pre-load the casing with scale inhibitor for the very first stage with 10 gpt.
- 30/50 mesh Ottawa sand, Slickwater frac.
- Maximum surface pressure 6200 psi.
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.

- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing over flush stage by 5 bbls (from top perf)
- Tubing Currently Landed @~8025
- Originally completed on 5/5/2008

**Existing Perforations:** 

DAISTIII	g Periorations:	Perfo	orations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Cove	erage
1	MESAVERDE	8240	8243	3	9	822	4 to	8226
	MESAVERDE		No Perfs			823	9 to	8243
	MESAVERDE	8286	8288	4	8	824	6 to	8248
	MESAVERDE	8363	8369	4	24	828	5 to	8289
	MESAVERDE		No Perfs			836	3 to	8371
2	MESAVERDE	8055	8062	4	28	809	9 to	8101
	MESAVERDE	8100	8103	4	12			
3	MESAVERDE	7812	7822	4	40	781	2 to	7821
	MESAVERDE		No Perfs			789	9 to	7901
4	MESAVERDE		No Perfs			753	3 to	7534
	MESAVERDE	7535	7537	3	6	753	5 to	7537
5	MESAVERDE	7398	7402	2	8	739	7 to	7408
	MESAVERDE		No Perfs			741	0 to	7417
	MESAVERDE	7424	7426	3	6	742	2 to	7427
	MESAVERDE	7446	7450	4	16	744	2 to	7452
	MESAVERDE	7458	7461	4	12	745	4 to	7463
6	MESAVERDE	7158	7161	2	6	715	7 to	7164
	MESAVERDE		No Perfs			717	0 to	7172
	MESAVERDE	7176	7179	3	9	717	4 to	7186
	MESAVERDE		No Perfs			719	2 to	7201
	MESAVERDE		No Perfs			721	4 to	7216
	MESAVERDE		No Perfs			722	4 to	7226
7	MESAVERDE		No Perfs			701	1 to	7012
	MESAVERDE	7022	7029	3	21	701	6 to	7025
	MESAVERDE		No Perfs			702	7 to	7038
	MESAVERDE	7042	7049	3	21	704	1 to	7059

## **Relevant History:**

<sup>\*</sup>Well has periodic SLICKLINE maintenance. From last SLICKLINE report: Seat Nipple Depth @~8013 and Fluid Level @~4200.

#### **H2S History:**

NBU\1022-1301CS						
Date	H2S H2S_SEPARATO R_PPM					
11/1/2008	50.00					
12/1/2008	48.00					
1/1/2009	88.00					
2/1/2009	0.00					
3/1/2009	60.00					
4/1/2009	32.00					
5/1/2009	29.00					
6/1/2009	45.00					
7/1/2009	10.00					
8/1/2009	5.00					
9/1/2009	40.00					
10/1/2009						
11/1/2009	64.00					
12/1/2009	0.00					
1/1/2010	60.00					
2/1/2010	94.00					
3/1/2010	102.00					
4/1/2010	85.00					

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

- 1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
- 2. TOOH with 2-3/8", 4.7#, J-55 (or N-80) tubing (currently landed at ~8025'). Visually inspect for scale and consider replacing if needed.
- 3. If tbg looks ok consider running a gauge ring to 6494 (50' below proposed CBP). Otherwise P/U a mill and C/O to 6494 (50' below proposed CBP).
- 4. Set 8000 psi CBP at ~ 6444'. ND BOPs and NU frac valves. Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 9-5/8" annulus with pressure relief valve in line. Pressure relief will be set to release at 500 psig. Lock OPEN the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

5. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	6324	6326	4	8
WASATCH	6331	6332	4	4
WASATCH	6402	6404	4	8
WASATCH	6413	6414	4	4

- 6. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~6324' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 7. Set 8000 psi CBP at ~6,113'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	То	spf	# of shots
WASATCH	5787	5788	4	4
WASATCH	5815	5816	4	4
WASATCH	6004	6006	4	8
WASATCH	6081	6083	4	8

- 8. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~5787' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 9. Set 8000 psi CBP at ~5,588'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	5242	5244	3	6
WASATCH	5418	5420	3	6
WASATCH	5544	5546	3	6
WASATCH	5556	5558	3	6

- 10. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~5242' flush only with recycled water.
- 11. Set 8000 psi CBP at~5192'.
- 12. TIH with 3 7/8" mill, pump open sub, XN nipple and tubing.
- 13. Mill 3 plugs and clean out to a depth of 6533'. THE WELL WILL BE COMMINGLED AT THIS TIME.
- 14. Land tubing at 6430, drop ball and pump open sub. Flow back completion load. RDMO.
- 15. MIRU, POOH tbg and mill. TIH with POBS and mill.
- 16. Mill last plug @ 6553' clean out to PBTD at 8459'. Land tubing at  $\pm 8025$ ' pump off bit and bit sub . This well WILL be commingled at this time.
- 17. Clean out well with foam and/or swabbing unit until steady flow has been established from recomplete.
- 18. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

For design questions, please call Michael Sollee, Denver, CO (720)-929-6057 (Office) (832)-859-0515 (Cell)

For field implementation questions, please call Jeff Samuels, Vernal, UT 435-781 7046 (Office)

### NOTES:

If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work

Verify that the Braden head valve is locked OPEN.

Name NBU 1022-1301CS Perforation and CBP Summary

		Per	forations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Cover	age
1	WASATCH	6324	6326	4	8	6306	to	6328.5
	WASATCH	6331	6332	4	4	6329.5	to	6336
	WASATCH	6402	6404	4	8	6382.5	to	6417.5
	WASATCH	6413	6414	4	4			
	# of Perfs/stage				24	CBP DEPTH	6,113	
								<u> </u>
2	WASATCH	5787	5788	4	4	5786	to	5789.5
	WASATCH	5815	5816	4	4	5813.5	to	5818.5
	WASATCH	6004	6006	4	8	6001	to	6008
	WASATCH	6081	6083	4	8	6079	to	6086
	# of Perfs/stage				24	CBP DEPTH	5,588	
3	B WASATCH	5242	5244	3	6	5241	to	5247
	WASATCH	5418	5420	3	6	5413.5	to	5420.5
	WASATCH	5544	5546	3	6	5543	to	5551.5
	WASATCH	5556	5558	3	6	5555	to	5559.5
	# of Perfs/stage				24	CBP DEPTH	5,192	
								1
	Totals				72			

RECEIVED: Jan. 24, 2012

ring Schedules NBU 1022-1301C	S			1		Casing Size Recomplete?	4.5 N			Swabbing Days Production Log			er of swabbing days ining a Production		recomple	103			
water Frac	Сору	to new b	oook			Pad?	Y			DFIT		Enter Number		Log					
water i rae				_		ACTS?	Y			Dill		Litter Number	ii di bi ii s						
_	Per	fs			Rate	Fluid	Initial	Final	Fluid	Volume	Cum Vol	Volume	Cum Vol	Fluid	Sand	Sand	Cum. Sand	Footage from	Sca Inhil
_														% of					
Zone	Top, ft.	Bot., ft	SPF	Holes	ВРМ	Туре	ppg	ppg		gals	gals	BBLs	BBLs	frac	% of frac	lbs	lbs	CBP to Flush	gal
1 WASATCH	6324	6326	- 4		Variod	Pre-Pad & Pump-in test			Slickwater	4,128	4,128	98	98						
WASATCH	6331	6332	4	0		ISIP and 5 min ISIP			Silckwater	4,120	4,120	30	30						40
WASATCH	6402	6404	4	Ω Ω		Slickwater Pad			Slickwater	17,583	21,712	419	517	15.0%	0.0%	٥	٥		53
WASATCH	6413	6414	7	4		Slickwater Ramp	0.25	1	Slickwater	58,611	80,323	1,396	1,912	50.0%	37.3%	36,632	36,632		17
WASATCH	0413	0414	-	*		Slickwater Ramp	1	2	Slickwater	41,028	121,350	977	2,889	35.0%	62.7%		98,173		0
WASATCH						Flush (4-1/2)	l '	-	Slickwater	4,128	125,479		2,988	33.0%	02.770	01,542	98,173		0
WASATCH					30	ISDP and 5 min ISDP			Slickwater	4,120	123,473	30	2,300				30,173		0
WASATCH						ISDP and 5 min ISDP			Slickwater										0
																	98,173		0
WASATCH WASATCH											125,479	98	2,988				90,173		40
WASATCH											123,473	30	2,300						308
WASATCH																			30
WASATCH										!	117.222								
WASATCH									Sand laden V	olume	117,222					60,000	E0 250	lbs sand/md-ft	
		# of Perf	0/040.00	24									Flush depth	6324	gal/md-ft	CBP depth		211	
		# Of Peri	s stage	24	50.0	About access the control							riusii depili	0324	,	or depui	0,113	211	
2 WASATCH	5787	5788			59.8 Varied	<< Above pump time (min) Pump-in test			Slickwater		0	0	0						
WASATCH	5815	5816	4	4		ISIP and 5 min ISIP			Slickwater		U	ا	٥						
WASATCH	6004	6006	4	4		Slickwater Pad			Slickwater	3,183	3,183	76	76	4= 00/			0		10
WASATCH			4	8		Slickwater Pad Slickwater Ramp	0.25	1	Slickwater		13,794	253	328	15.0%	0.0%	6,632	6,632		32
WASATCH	6081	6083	4	8		Slickwater Ramp Slickwater Ramp	1	2	Slickwater	10,611 7,428	21,222	253 177	328 505	50.0% 35.0%	37.3% 62.7%	11,142	17,774		0
WASATCH						Flush (4-1/2)	'	-	Slickwater	3,778	25,000	90	595	35.0%	62.7%	11,142	17,774		0
WASATCH					30	ISDP and 5 min ISDP			Slickwater	3,770	25,000	90	393				17,774		0
						ISDP and 5 min ISDP			Slickwater										0
WASATCH WASATCH																	17,774		0
WASATCH											25,000	90	595				17,774		36
WASATCH											23,000	30	393						78
WASATCH																			70
WASATCH WASATCH									Sand laden V	laluma.	21,222								
WASATCH									Sanu lauen v	l	21,222				gal/md-ft	66,092	EE 252	lbs sand/md-ft	
		# of Perf:	l eletana	24									Flush depth	5787		CBP depth		199	
		- 01 1 611	l	24	11.9	<< Above pump time (min)							r idan depui	5707		l acpair	5,500	133	
3 WASATCH	5242	5244	3	6		Pump-in test			Slickwater		0	0	0						
WASATCH	5418	5420	3	6		ISIP and 5 min ISIP			On CR Water		U	ا ا	٥		1				
WASATCH	5544	5546	3	6		Slickwater Pad			Slickwater	3,237	3,237	77	77	15.0%	0.0%	0	0		10
WASATCH	5556	5558	3	6		Slickwater Paul	0.25	1	Slickwater	10,789	14,026	257	334	50.0%	37.3%	6,743	6,743		32
WASATCH	3336	3338	3	l °		Slickwater Ramp	1	2	Slickwater	7,552	21,578	180	514	35.0%	62.7%	11,328	18,072		0
WASATCH						Flush (4-1/2)	Ι΄.	-	Slickwater	3,422	25,000	81	595	35.0%	02.770	11,020	18,072		0
WASATCH					50	ISDP and 5 min ISDP			Slickwater	5,422	20,000	"	333		1		.0,572		0
WASATCH					1	ico. and o min look			Circhwatel						1				0
WASATCH					1										1		18,072		0
WASATCH					1						25,000	81	595		1		10,072		0
WASATCH					1						20,000	"	333		1				42
WASATCH					l		1								l				72
WASATCH					1										1				
WASATCH					1				Sand laden V	/olume	21,578				1				
OATOIT					1				Cario iaudii V		21,070				gal/md-ft	141,125	118 102	lbs sand/md-ft	
		# of Perf:	s/stage	24	1								Flush depth	5242		CBP depth		50	
					11.9	<< Above pump time (min)													
Totals				72						Total Fluid	175,479	gals	4,178	bbls		Total Sand	134,019		
Totals				72						Total Fluid	175,479 4,178		4,178	bbls		Total Sand	134,019		

Total Stages 3 stages Last Stage Flush 3,422 gals

 
 Service Company Supplied Chemicals - Job Totals

 Friction Reducer
 86
 gals @
 0.5

 Suffactant
 172
 gals @
 1.0

 Clay Stabilizer
 86
 gals @
 0.5

 1.5% Hcl
 750
 gals @
 250

 Iron Control for acid
 4
 gals @
 5.0

 Surfactant for acid
 2
 gals @
 2.0

 Corrosion Inhibitor for acid
 3
 gals @
 4.0
 GPT GPT GPT gal/stg GPT of acid GPT of acid GPT of acid

# Acid Pickling and H2S Procedures (If Required)

#### \*\*PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

#### \*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

# **Key Contact information**

Completion Engineer

Michael Sollee: 832-859-0515, 720-929-6057

**Production Engineer** 

Kyle Bohannon: 804-512-1985, 435-781-7068

Completion Supervisor Foreman

Jeff Samuels: 435-828-6515, 435-781-7046

Completion Manager

RECEIVED: Jan. 24, 2012

<sup>\*\*</sup> As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

Jeff Dufresne: 720-929-6281, 303-241-8428

Vernal Main Office

435-789-3342

# Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

RECEIVED: Jan. 24, 2012

MD	TVD	INC	MD	TVD	INC
0	0	0	4660	4450.354	30.13
100	100	0.5	4712	4495.142	30.94
200	199.99	0.75	4784	4556.997	
300	299.98		4846	4610.519	
400	399.96		4908	4664.041	30.63
500	499.92	1.75	4970	4717.547	
600	599.86		5032	4770.846	
700	699.8		5093	4823.029	
800	799.73		5156	4877.275	
900	899.65		5218	4931.1	29.38
1000	999.55	2.5	5280	4985.094	
1100	1099.46		5341	5038.136	
1200	1199.36		5403	5092.074	
1300	1299.3		5465	5145.827	
1400	1399.27	0.5	5527	5199.485	
1500	1499.27		5588	5252.722	
1600	1599.27		5651	5308.41	
1700	1699.26		5715	5365.7	
				5423.448	
1800	1799.24		5779		
1900	1899.21	1.5	5842	5480.541	
2000	1999.16	2	5906	5539.015	23.13
2100	2099.143	2.20	5969	5597.204	
2166	2165.124		6033	5656.75	
2225	2224.07		6096	5715.688	
2287	2286.005		6160	5775.9	
2348	2346.889		6224	5836.436	
2410	2408.593		6288	5897.196	
2472	2470.048		6351	5957.145	
2533	2530.218		6414	6017.187	
2595	2591.065		6478	6078.257	
2657	2651.637	13	6542	6139.429	
2719	2711.866		6606	6200.773	
2780	2770.849		6669	6261.407	
2842	2830.639		6733	6323.234	
2904	2890.19		6796	6384.312	13.69
2965	2948.406		6860	6446.639	
3026	3006.231	19.13	6924	6509.268	11.19
3088	3064.572	20.44	6987	6571.194	10
3150	3122.574	20.94	7051	6634.281	
3210	3178.253	22.8	7115	6697.581	7.56
3272	3235.449	22.63	7169	6751.16	6.75
3334	3292.821	21.94	7242	6823.73	5.69
3428	3379.859	22.44	7306	6887.473	4.56
3521	3464.892	25.31	7370	6951.312	3.56
3614	3548.676	26.19	7433	7014.213	2.88
3706	3630.439	28.38	7498	7079.124	3.13
3799	3710.23	33.39	7560	7141.018	3.56
3891	3788.743	29.44	7624	7204.912	3.13
3982	3867.476	30.75	7688	7268.837	2.44
4044	3920.534	31.56	7751	7331.801	1.44
4106	3973.575	30.81	7847	7427.775	1.25
4167	4026.102	30.31	7942	7522.747	1.5
4229	4079.676	30.13	8038	7618.718	1.31
4237	4086.571	30.82	8123	7703.695	1.38
4291	4133.187	29.81	8229	7809.664	1.38
4351	4133.167	30.44	8325	7905.64	1.19
4414	4238.993	31.88	8421	8001.616	1.19
4414	4236.993	31.00			
4476			8508	8088.594	1.25
4550	4396.731	30.13			

#### STATE OF UTAH AMENDED REPORT FORM 8 DEPARTMENT OF NATURAL RESOURCES (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 08512 ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME **ഡ**. □ GAS VELL DRY OTHER UTU63047A b. TYPE OF WORK: WELL NAME and NUMBER: PIFF. Z RE-ENTRY RECOMPLETION NBU 1022-1301CS OTHER 2. NAME OF OPERATOR 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304739476 3. ADDRESS OF OPERATOR: PHONE NUMBER 10 FIELD AND POOL, OR WILDCAT P.O.BOX 173779 STATE CO ZIP 80217 CITY DENVER (720) 929-6304 **NATURAL BUTTES** 4. LOCATION OF WELL (FOOTAGES) 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: AT SURFACE: NESW 1745 FSL 1705 FWL S13,T10S,R22E NESW 13 10S 22E AT TOP PRODUCING INTERVAL REPORTED BELOW: 12. COUNTY 13. STATE AT TOTAL DEPTH: SWSE 775 FSL 1920 FEL S13,T10S,R22E **UTAH** UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED 11/13/2007 2/10/2008 READY TO PRODUCE 🔽 4/10/2012 5293 GL 18. TOTAL DEPTH: 19. PLUG BACK T.D.: MD 8,519 8.560 20. IF MULTIPLE COMPLETIONS, HOW MANY? 21. DEPTH BRIDGE MD PLUG SET: TVD 8,141 TVD 8.100 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) 23 WAS WELL CORED? ио 🗸 YES (Submit analysis) CBL/CCL/GR WAS DST RUN? NO 🔽 YES [ (Submit report) DIRECTIONAL SURVEY? YES 7 NO. (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER DEPTH **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* AMOUNT PULLED NO. OF SACKS VOLUME (BBL) 20" STL 36.7# 0 40 28 12 1/4" 9 5/8" J-55 36# 0 2,160 650 7 7/8" 4 1/2" 1-80 11.6# 0 8.560 1,560 25. TUBING RECORD SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 8.032 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) PERFORATION STATUS SIZE NO HOLES (A) WASATCH 5.242 6,414 5,242 6,414 Open 🔽 0.36 Squeezed (B) Open Squeezed (C) Open Squeezed (D) Open Squeezed 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND TYPE OF MATERIAL PUMP 4,199 BBLS SLICK H2O & 134,191 LBS 30/50 OTTAWA SAND ILIN Z 6 ZUTZ 5242-6414 3 STAGES DIV. OF OIL, GAS & MINING 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION **CORE ANALYSIS** OTHER:

31.	INITIAL PRODUCTIO	N
DA.	E FIRST PRODUCED	:

TEST DATE:

#### INTERVAL A (As shown in Item #26)

TEST PRODUCTION |OIL - BBL:

GAS - MCF:

WATER - BBL:

PROD. METHOD:

HOURS TESTED:

4/10/2012	?	6/5/2	012		2	<u>.</u> 4	RATES: →	0	846	2		FLOWING
CHOKE SIZE: 48/64	TBG. PRESS 204	CSG. PRI 74		API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL-BBL:	GAS - MCF: 846	WATER -	BBL:	INTERVAL STATUS: PROD
					INTE	ERVAL B (As sho	wn in item #26)					
DATE FIRST PR	ODUCED:	TEST DA	TE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS MCF:	WATER -	BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	csg. PR	ESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER -	BBL:	INTERVAL STATUS:
					INTE	RVAL C (As sho	wn in item #26)	<del></del>			<del> </del>	
DATE FIRST PR	ODUCED:	TEST DA	TE:		HOURS TESTED	:	TEST PRODUCTION RATES: →	I OIL - BBL:	GAS MCF:	WATER -	BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	s. CSG. PR	ESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER -	BBL:	INTERVAL STATUS:
					INT	RVAL D (As sho	wn in item #26)					
DATE FIRST PR	ODUCED:	TEST DATE:			HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS MCF:	WATER - BBL:		PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	csg. PR	ESS.	API GRAVITY	BTU GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	ON OIL-BBL: GAS-MCF: WA		WATER -	BBL:	INTERVAL STATUS:
32. DISPOSITIO	N OF GAS (So	old, Used for F	uel, Vent	ted, Etc.)			•					
33. SUMMARY	OF POROUS Z	ONES (Includ	e Aquife	rs):			1:	34. FORMATION	(Log) MARKERS:			
Show all importatested, cushion u	nt zones of por sed, time tool o	osity and conte open, flowing a	ents there and shut-ir	eof: Cored interval n pressures and r	ls and all drill-stem ecoveries.	tests, including de	opth interval					
Formatio	on	Top (MD)	Botto (MI		Descript	ions, Contents, etc			Name		(1	Top Measured Depth)
								GREEN RI BIRD'S NE MAHOGAN WASATCH MESAVER	ST IY I			1,045 1,302 1,674 4,139 6,513
	1			I								

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the recompletion history and perforation report. Original perfs were in Mesaverde at 7022-8369'; new perfs are in Wasatch at 5242-6414'. Production test information is from commingled zones.

36. I hereby certify that the foregoing and attached inf		

NAME (PLEASE PRINT) CARA MAHLER

TITLE REGULATORY ANALYST

SIGNATURE

DATE 6/19/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- · drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

<sup>\*\*</sup> ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

### 1 General

#### 1.1 Customer Information

Company	S ROCKIES REGION
Representative	
Address	

#### 1.2 Well/Wellbore Information

Well	NBU 1022-13O-1CS BLUE	Wellbore No.	OH
Well Name	NBU 1022-13O-1CS	Wellbore Name	NBU 1022-13O-1CS
Report No.	1	Report Date	4/1/2012
Project	UTAH-UINTAH	Site	WHITE RIVER PAD
Rig Name/No.	ROCKY MOUNTAIN WELL SERVICE 3/3	Event	RECOMPL/RESEREVEADD
Start Date	4/1/2012	End Date	4/9/2012
Spud Date	11/13/2007	Active Datum	RKB @5,310.00usft (above Mean Sea Level)
UWI	NBU 1022-13O-1CS		

#### 1.3 General

Contractor	1	Job Method	Supervisor	
Perforated Assembly		Conveyed Method		

#### 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

### 1.5 Summary

Gross Interval	5,242.0 (usft)-6,414.0 (usft	Start Date/Time	4/2/2012 12:00AM
No. of Intervals	12	End Date/Time	4/2/2012 12:00AM
Total Shots	. 72	Net Perforation Interval	20.00 (usft)
Avg Shot Density	3.60 (shot/ft)	Final Surface Pressure	
		Final Press Date	

# 2 Intervals

#### 2.1 Perforated Interval

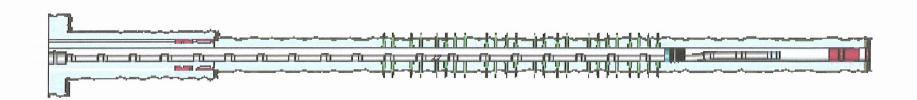
Date	Formation/ CCL@ (usft)	CCL-T MD Top I S (usft)	(usft)	Shot Density (shot/ft)	Misfires/ Diamete Carr Type /Carr Manuf Add. Shot r (in)	Carr Size (in)	Phasing Charge Desc /C (°) Manufactur	요즘 중요 그리는 요요요요. 요즘 중요 마음에 얼마요 그렇게 지나가면 가지 않아야 했다. 것이었다.
	NASATCH/	5,242.0	5,244.0	3.00	0.360 EXP/	3.375	120.00	23.00 PRODUCTIO
12:00AM								N

#### 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/2/2012 12:00AM	WASATCH/			5,418.0	5,420.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			5,544.0	5,546.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			5,556.0	5,558.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			5,787.0	5,788.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			5,815.0	5,816.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			6,004.0	6,006.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			6,081.0	6,083.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			6,324.0	6,326.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO	
4/2/2012 12:00AM	WASATCH/			6,331.0	6,332.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO	
4/2/2012 12:00AM	WASATCH/			6,402.0	6,404.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
4/2/2012 12:00AM	WASATCH/			6,413.0	6,414.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	

# 3 Plots

### 3.1 Wellbore Schematic



				Opera	ition S	umma	ry Report	
Well: NBU 1022	-130-1CS BLUE						Spud Date: 11/	/13/2007
Project: UTAH-l	Site: WH	ITE RIVE	R PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE		
Event: RECOM	PL/RESEREVEADD		Start Dat	e: 4/1/201	12			End Date: 4/9/2012
Active Datum: F Level)	KKB @5,310.00usft (a	above Mean Se	ea	UWI: NI	BU 1022-	13O-1CS		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/23/2012	12:00 - 18:00	6.00	СОМР	47	Α	Р		MIRU, 200 PSI TBG, CNTRL TBG W/ 20 BBLS N/D WH, N/U WH, UNLAND TBG, MIRU SCAN TECH, POOH SCAN TBG. SCAN 254 JTS 2 3/8" L-80 TBG. 0 RED, 254 YELLOW BAND. R/D SCAN TECH CSG OPEN TO SALES 6 PM SDFWE
3/28/2012	8:00 - 10:00	2.00	COMP	34	I	P		MIRU, JW WRELINE P/U HALB 10K CBP, RIH SET @ 6444, POOH, R/D JW, MIRU B&C QUICK TEST, PSI TEST FV,CBP,CSG, 1000# 15 MIN 40 LOSS, 3500# 15 MIN 40 LOSS, 6200# 30 MIN 80 LOSS, RDMO B&C
3/30/2012	7:00 - 12:00	5.00	COMP	37		Р		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW

Р

HSM, GOING OVER FRAC

4/2/2012

7:00 - 7:15

0.25

COMP

48

Ven. IVDO 1022	-130-1CS BLUE						Spud Date: 11	/13/2007		
Project: UTAH-L	JINTAH		Site: WH	ITE RIVE	R PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3		
Event: RECOMI	PL/RESEREVEADD		Start Date: 4/1/2012					End Date: 4/9/2012		
ctive Datum: R evel)	KKB @5,310.00usft (ab	ove Mean Se	a	UWI: N	BU 1022	-13O-1CS				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From	Operation		
	7:15 - 14:00	6.75	COMP	36	B B	P	(usft)	PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 30/50 MESH SAND & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S. REFER TO STIM PJR FOR FLIUD, SAND AND CHEMICL VOLUME PUM'D  FRAC STG #1] WHP=32#, BRK DN PERFS=1,484#, @=3.6 BPM, INJ RT=51, INJ PSI=3,713#, INITIAL ISIP=330#, INITIAL FG=.49, FINAL ISIP=2,324#, FINAL FG=.80, AVERAGE RATE=50.8, AVERAGE PRESSURE=3,947#, MAX RATE=50.1, MAX PRESSURE=5,028#, NET PRESSURE INCREASE=1,954#, 19/24 77% CALC PERFS OPEN. X OVER TO WIRE LINE  PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,113', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW  FRAC STG #2] WHP=1,092#, BRK DN PERFS=2,513#, @=4 BPM, INJ RT=50.9, INJ PSI=3,739#, INITIAL ISIP=1,412#, INITIAL FG=.68,		
								FINAL ISIP=1,651#, FINAL FG=.72, AVERAGE RATE=51, AVERAGE PRESSURE=3,519#, MAX RATE=51.2, MAX PRESSURE=4,438#, NET PRESSURE INCREASE=239#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE  PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=5,588', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE, AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW		
								FRAC STG #3] WHP=152#, BRK DN PERFS=2,391#, @=4.2 BPM, INJ RT=51, INJ PSI=3,886#, INITIAL ISIP=1,169#, INITIAL FG=.66, FINAL ISIP=1,591#, FINAL FG=.73, AVERAGE RATE=51.1, AVERAGE PRESSURE=3,409#, MAX RATE=51.2, MAX PRESSURE=4,004#, NET PRESSURE INCREASE=422#, 21/24 87% CALC PERFS OPEN. X OVER TO WIRE LINE P/U RIH W/ HALIBURTON 8K CBP, SET FOR TOP KILL @=5,192′		
4/5/2012	12:00 - 15:00	3.00	COMP	31	1	P		TOTAL FLUID PUMP'D=4,199 BBLS TOTAL SAND PUMP'D=134,191# MIRU, SPOT EQUIP, NDWH, NUBOP, P/U 3 7/8" BIT, PUMP OPEN BIT SUB, XN SN, & 59 JTS 2 3/8" L-80 TBG OFF FLOAT RIH TO 1851', SHUT DOWN DUE TO HIGH WINDS, SWIFWE, D/O PLUGS		
	7:00 - 7:15	0.25	COMP	48		P		MONDAY HSM- JSA		

/ell: NBU 1022-13O-1CS BLUE		Sp	ud Date: 11/13/2007
oject: UTAH-UINTAH	Site: WHI	TE RIVER PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
vent: RECOMPL/RESEREVEADD	Start Date	e: 4/1/2012	End Date: 4/9/2012
tive Datum: RKB @5,310.00usft (above Mean Sea vel)	a	UWI: NBU 1022-130-1CS	
Date Time Duration Start-End (hr)	Phase	Gode Sub P/U	MD From Operation (usft)
7:15 - 17:00 9.75	CÓMP	44 C P .	CONT TO RIH W/ 2 3/8" L-80 TBG OFF FLOAT. TAG FILL @ 5177', RU PWR SWVL & BREAK CIRC. PRESS TEST BOP TO 3000 PSI, TEST GOOD.
			C/O 15' SAND, TAG 1ST PLUG @ 5,192' DRL PLUG IN 10 MIN. 300 PSI INCREASE, CSG PRESS 100 PSI, RIH TAG FILL @ 5,558'.
			C/O 30' SAND, TAG 2ND PLUG @ 5,588' DRL PLUG IN 10 MIN. 100 PSI LOSS , CSG PRESS 0 PSI. RIH TAG FILL @ 6,088', RU WEATHERFORD FOAM UNIT & BREAK CIRC.
			C/O 25' SAND, TAG 3RD PLUG @ 6,113' DRL PLUG IN 9 MIN. 100 PSI INCREASE , CSG PRESS 200 PSI. RIH & TAG FILL @ 6,414'.
			C/O 20' SAND TO 6,434', 10' ABOVE ISOL PLUG. CIRC CLEAN W/ FOAM UNIT, RD FOAM UNIT & POWER SWIVEL
			POOH W/ 10 JTS & REMOVE STRING FLOAT, RIH W/ 5 JTS & LAND TBG @ 6296.54' W/ 200 JTS 2 3/8" L-80 TBG.
			R/D FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL, PMP OPEN BIT W/ 750 PSI.
			TURN OVER TO FLOW BACK CREW. TBG PRESS 0 PSI CSG PRESS 900 PSI.
			RDMO, MIRU ON NBU 1022-13K4S, SDFN.
			KB= 17' 4 1/16" WEATHERFORD HANGER= .83' 200 JTS 2 3/8" L-80 = 7,276.51'
			POBS≈ 2.20' EOT @ 6,296.54'
			TWTR= 4,362 BBLS TWR= 335 BBLS TWLTR= 4,027 BBLS
			SENT 54 JTS YELLOW BAND 2 3/8" L-80 TBG (1,717.20') TO SAMUELS YARD.
4/10/2012 11:55 -	PROD	50	WELL TURNED TO SALES AT 1155 HR ON 4/10/2012 - 600 MCFD, 480 BWPD, FCP 980#, FTP
4/12/2012 7:00 -		50	162#, CK 24/64 WELL IP'D ON 4/12/12 - 724 MCFD, 0 BOPD, 0 BWPD, CP 571#, FTP 115#, CK 48/64", LP 108#, 24
4/13/2012 -			HRS

# **Operation Summary Report**

Well: NBU 1022	-130-1C	S BLUE						Spud Date: 11/13/2007
Project: UTAH-U	JINTAH			Site: WH	ITE RIVE	R PAD		Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: WELL W	ORK EX	PENSE		Start Dat	e: 4/20/20	012		End Date: 5/30/2012
Active Datum: RKB @5,310.00usft (above Mean Sea Level)				a	UWI: N	BU 1022-1	30-1CS	
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
5/25/2012	7:00	- 7:15	0,25	PROD	48		Р	HSM-JSA
5/29/2012	7:15 7:00	- 15:00 - 7:15	7.75 0.25	PROD PROD	31 48	I	P P	RDMÖ, NBU 1022-13K3T, MIRU, CONTROL WELL W 30 BBLS TMÁC, NÖWH, NÜBÖP, SHUT DOWN DUE TO HIGH WINDS, SWIFWE HSM-JSA
	7:15	- 15:00	7.75	PROD	31	i	P	SITP 600 PSI, FTP 125 PSI, CONTROL WELL W/ 30 BBLS TMAC, POOH W/ 170 JTS PUMP 20 BBLS TMAC TO CONTROL WELL, POOH W/ 30 JTS, L/D PUMP OPEN BIT SUB, P/U 3 7/8" BIT, POBS, RERUN XN SN. RIH W/ 200 JTS, P/U 3 JTS OFF FLOAT TAG FILL @ 6,370', R /U PWR SWIVEL, SWIFN
5/30/2012		- 7:15	0.25	PROD	48		Р	HSM-JSA
	7:15	- 17:00	9.75	PROD	44	С	P	R/U WEATHERFORD FOAM UNIT, TRY TO BRK CIRC, PRESS UP & STUCK TBG, WORK TBG FREE, BRK CIRC W/ FOAM UNIT, C/O 74' SAND TAG ISO PLUG @ 6,444'.
								DRL HAL 8K CBP IN 6 MIN, 400 PSI INC, FCP 200 PSI, CONT TO P/U TBG OFF FLOAT RIH TAG FILL @ 8,300', C/O 143' SAND TO 8,443', R/D PWR SWIVEL, POOH L/D 13 JTS ON FLOAT, LAND W/ 255 JTS 2 3/8" L-80 EOT@ 8032.20', R/D FLOOR & TBG EQUIP, NDBOP, NUWH, DROP BALL PUMP OFF BIT @ 1,600 PSI, R/D FOAM UNIT, SHUT IN WELL TO BUILD PRESS, TURN OVER TO PROD SICP 800 PSI, SITP 250 PSI, RDMO.
								MIRU ON NBU 1022-13M2CS, SDFN.
								KB-17' HANGER83' 255 JTS 2 3/8" L-80- 8,012.17' POBS-2.20' EOT @ 8,032.20'
								TWTR=160 BBLS TWR=176 BBLS TWLTR= 0 BBLS

	STATE OF UTAH				FORM 9
ī	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		à		DESIGNATION AND SERIAL NUMBER: 8512-ST
SUNDR	Y NOTICES AND REPORTS	S ON	WELLS	6. IF INDIA	AN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significant reenter plugged wells, or to drill horiz n for such proposals.				CA AGREEMENT NAME: L BUTTES
1. TYPE OF WELL Gas Well				1 -	IAME and NUMBER: 22-1301CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	<b>9. API NUMBER:</b> 43047394760000				
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 802		ONE NUMBER: '9 720 929-6	1	and POOL or WILDCAT: LL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747 FSL 1705 FWL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 13 Township: 10.0S Range: 22.0E Me	S	STATE: UTAH		
11. CHECK	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OT	HER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT		NEW CONSTRUCTION
11/25/2014	OPERATOR CHANGE		PLUG AND ABANDON		PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR		VENT OR FLARE		WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION		APD EXTENSION
Report Date:			SI IA STATUS EXTENSION		
	WILDCAT WELL DETERMINATION		OTHER	OTHER	
	COMPLETED OPERATIONS. Clearly sho 13O1CS WAS RETURNED 11/25/2014. THANK YO	TO PF		oil FOR	ccepted by the Stah Division of Gas and Mining RECORD ONLY ecember 08, 2014
NAME (PLEASE PRINT) Kay E. Kelly	<b>PHONE NUN</b> 720 929 6582	IBER	TITLE Regulatory Analyst		
SIGNATURE N/A			<b>DATE</b> 12/8/2014		

	STATE OF UTAH			FOR	М 9
ı	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M		3	5.LEASE DESIGNATION AND SERIAL NUMB STUO-08512-ST	ER:
SUNDR	RY NOTICES AND REPORTS	ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	posals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 1022-1301CS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047394760000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802	NE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 1NATERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747 FSL 1705 FWL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 13 Township: 10.0S Range: 22.0E Mei	S	STATE: UTAH		
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA	_
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME	
Approximate date work will start:	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	NEW CONSTRUCTION	
5/5/2015	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK	
	✓ PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:			SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
DRILLING REPORT	L TUBING REPAIR		/ENT OR FLARE	WATER DISPOSAL	
Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION	
	WILDCAT WELL DETERMINATION		OTHER	OTHER:	
The NBU 1022-130	COMPLETED OPERATIONS. Clearly show D1CS well was returned to Thank you.	prod	uction on 5/5/2015.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 13, 2015	
NAME (PLEASE PRINT) Jennifer Thomas	<b>PHONE NUM</b> 720 929-6808	IBER	TITLE Regulatory Specialist		
SIGNATURE N/A			<b>DATE</b> 5/8/2015		

	STATE OF UTAH			FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN			5.LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST
SUNDR	RY NOTICES AND REPORTS	ON WEL	LS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.			7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 1022-1301CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.			9. API NUMBER: 43047394760000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	MBER: 720 929-6	9. FIELD and POOL or WILDCAT: 451ATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747 FSL 1705 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 1		STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE	OF NOTICE, REPOR	₹T, OR OTHER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION	
	ACIDIZE	ALTER CAS	ilng	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE T	JBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMING	E PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE	TREAT	☐ NEW CONSTRUCTION
9/2/2016	OPERATOR CHANGE	PLUG AND		PLUG BACK
	✓ PRODUCTION START OR RESUME		ION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT  Date of Spud:				
				☐ TEMPORARY ABANDON
DRILLING REPORT	L TUBING REPAIR	☐ VENT OR F		☐ WATER DISPOSAL
Report Date:	WATER SHUTOFF	☐ SI TA STAT	US EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER		OTHER:
The NBU 1022-130	COMPLETED OPERATIONS. Clearly show 1CS well was returned to p Thank you.	roductio	n on 09/2/2016.	
NAME (PLEASE PRINT) Candice Barber	<b>PHONE NUME</b> 435 781-9749		: Representative	
SIGNATURE N/A		<b>DATE</b> 9/6/2		
14/73		∥ 9/0/.	_ U I U	

	FORM 9				
ι	5.LEASE DESIGNATION AND SERIAL NUMBER: STUO-08512-ST				
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-1301CS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047394760000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PHO h Street, Suite 600, Denver, CO, 80217 377	NE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 45)&TUERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1747 FSL 1705 FWL	COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 1	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
7	☐ ACIDIZE ☐ A	ALTER CASING	CASING REPAIR		
Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
10/31/2016	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE ✓ F	PLUG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION S	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	/ENT OR FLARE	WATER DISPOSAL		
☐ DRILLING REPORT	☐ WATER SHUTOFF ☐ S	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all pe	rtinent details including dates, d	enths, volumes, etc.		
	Gas Onshore, LP respectfully re		roved by the		
ı· •	e NBU 1022-1301CS well. Plea	00 000 1110	h Division of as and Mining		
attached p	procedure for details. Thank you				
	cember 15, 2016				
		By:	15/ K Quit		
		Planca Davi	ew Attached Conditions of Approval		
		I icase Nevi	CW Attached Conditions of Approval		
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Candice Barber	435 781-9749	HSE Representative			
SIGNATURE N/A		<b>DATE</b> 10/31/2016			



### The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

### Sundry Conditions of Approval Well Number 43047394760000

- 1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338. 2. Amend Plug #1: A minimum of 8 sx shall be spotted on the CIBP @ 6536'.
  - 3. All balanced plugs shall be tagged to ensure that they are at the depth specified.
    - 4. All annuli shall be cemented from a minimum depth of 100' to the surface.
  - 5. Surface reclamation shall be done in accordance with R649-3-34 Well Site Restoration.
  - 6. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.
- 7. If there are any changes to the procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.
- 8. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.

RECEIVED: Dec. 15, 2016

12/15/2016				Wellb	ore Dia	gram				г263
API Well I	(o: 43-04	17-39476-00-00	Permit	No:		Well Nan	ne/No: NBU	1022-1301	ICS	
		ERR-MCGEE OI			E, L.P.					
1 0		Γ: 10S R: 22E Sp			String Info	ormation				
		37400 Y: 4423050			_	Bottom	Diameter	Weight	t Length	Capue (fl
		JRAL BUTTES			String	(ft sub)	(inches)	(lb/ft)	(ft)	(+10
County Na					HOL1	40	20			
County Na	me: on				COND	40	14	36.7	40	
		P uy  12 85x  from 40 ft.	# 6	_	HOL2	2160	12.25			
~	١ .	IN RSV	= (05	1	SURF	2160	9.625	36	2160	
	Cement f	from 40 ft.	T	sceo'	HOL3	8560	7.875	11.6	9560	1645
-c <sub>1</sub>	Conducto	or: 14 in. @ 40 ft.	- ,	. (1	PROD	8560 '	4.5	11.6	8560	11.45 3-6
	Hole: 20	in. @ 40 ft.	C(295x	7/11/2X3	010)=10	ን '	95/	3" K41/2	." -	Z- 3-0
1 7	971	from 40 ft. or: 14 in. @ 40 ft. in. @ 40 ft.	_	7	oceo'		• (	,	•	
, _ X	. (	109#	÷5							
21 - A 1	007-	(1657) (1-15) om 2160 ft. to surface	((1.459)	= 210'	t					
	Cament fro	om 2160 ft. to surface	torg	= 797	VOR					
	Content II	635 : @ 2160 <del>0</del>								
2	3011ace. 9.	625 in. @ 2160 ft.			Cement In	formation				
N AL	Hole: 12.2:	5 in. @ 2160 ft.				BOC	TOC			
IVI					String	(ft sub)	(ft sub)	Class	Sacks	
		Plug # (1-15)			COND	40		UK	28	
عرا 📈 📗	i.	Plugth	1		PROD	8560	0	HS	310	
24 - 24 26 - 24	40'		/11456	)= 5801	PROD	8560	0	50	1250	
عاد ا		MARY (1-12)	-	1 - 300	SURF	2160	0	HG	200	
1 7 30	,00		1000 S	2060	SURF	2160	0	G	450	
sew 30	,			YOUR						
XX   X		Prog # 2	<b>S</b>							
1/\	t	1134	·	~	Perforatio	n Informat	tion			
144 - 41	39	(A224) (1:12)	Cliras	7) -543 ?( - 1	Тор	Bottom	Ch4-	/IE4 N. C	has Da Cour	
TC	3		ريان	1600,	(ft sub)	(ft sub)	Snts	rt Nos	hts Dt Sque	eeze
	1		_	NOW.	6242	8369 6414				
50	87	Plugt (BOK) CLUS	F ~		3242	0414				
× cu	pe5192	(2) (1)	-1/ 11.45	12056						
	~u_1	(82K) C.	( 0	50971						
	7-72		TOCE	2001	02					
	, h , r <sup>E</sup>				Formation	Informati	on			
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20 20	ope 6	536 The	1109		UNTA	0				
-0		X 100'	6.6530	V CIBL	GRRV	902				
	ka22 1		111	(u =\ =	PARCK	2534 3600				
	J-2	536 * * * * * * * * * * * * * * * * * * *	/ ( l,15)	(ILUSY) =	. BMSW WSTC	3600 4144				
C	ement from	8560 ft. to surface		(85x	MVRD	6513				
P	oduction: 4	1.5 in. @ 8560 ft.				~~~				
н	ole: 7.875 i	in. @ 8560 ft.								
	13691	-								
The second second										

NBU 1022-1301CS 1747' FSL & 1705' FWL NESW SEC. 13, T10S, R22E UINTAH UT

 KBE:
 5310'
 API NUMBER:
 4304739476

 GLE:
 5292'
 LEASE NUMBER:
 STUO-08512-ST

**TD:** 8560' **LAT/LONG:** 39.946444/-109.391514

**PBTD:** 8519'

CASING: 12.25" hole

SURFACE 9.625" 36# J-55 @ 2119'

7.875" hole

PRODUCTION 4.5" 11.6# N-80 @ 8547'

Est. TOC @ 135' CBL

PERFORATIONS: WASATCH-MESAVERDE TOP-BOTTOM 5242'-8369'

**TUBING:** 2.375" 4.7# L80 TBG at 8015'

Tubular/Borehole	ID	Drift	Collapse psi	Burst psi	Capacities			
Tubulal/ Bolellole	inches	inches			Gal./ft.	Cuft/ft.	Bbl./ft.	
2.375" 4.7# J-55 tbg	1.995	1.901	8100	7700	0.1624	0.02171	0.00387	
2.375" 4.7# P-110 tbg	1.995	1.901	13800	15400	0.1624	0.02171	0.00387	
2.375" 4.7# L-80 tbg	1.995	1.901	11780	11200	0.1624	0.02171	0.00387	
4.5" 11.6# N-80 csg	4	3.875	6350	7780	0.65282	0.08727	0.01554	
9.625" 36# J-55 csg	8.921	8.765	2020	3520	3.24699	0.43406	0.07731	

Annular Capacities	Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" tbg. X 4.5" csg	0.42272	0.05651	0.01006
4.5" csg. X 9.625" csg	2.42077	0.32361	0.05764
4.5" csg X 7.875 borehole	1.70406	0.2278	0.04057

#### **GEOLOGIC INFORMATION:**

Formation Depth to top, ft.

Top Green River902'Top Mahogany1730'Base Parachute2534'Top Wasatch4139'Top Mesaverde6536'

http://digitallibrary.utah.gov/awweb/awarchive?type=file&item=55737

BMSW Elevation ~1710' MSL BMSW Depth ~3600'

1

#### NBU 1022-1301CS PLUG & ABANDONMENT PROCEDURE

#### GENERAL

- H2S MAY BE PRESENT. CHECK FOR H2S AND TAKE APPROPRIATE PRECAUTIONS.
- BLOW DOWN BRADEN HEAD AND SURFACE CASING AS NEEDED AS PER SOP.
- CEMENT QUANTITIES BELOW ASSUME NEAT CLASS G, 15.8ppg, YIELD 1.145 CUFT/SX. IF A
  DIFFERENT PRODUCT IS USED, WELLSITE PERSONNEL ARE RESONSIBLE FOR CORRECTING
  QUANTITIES TO YIELD THE STATED SLURRY VOLUME.
- TREATED FRESH WATER WILL BE PLACED BETWEEN ALL PLUGS INSTEAD OF BRINE.
- ALL DISPLACEMENT FLUID SHALL CONTAIN CORROSION INHIBITOR AND BIOCIDE. PREMIX 5
  GALLONS PER 100 BBLS FLUID AND IS TO BE PLACED BETWEEN ALL PLUGS.
- NOTIFY APPROPRIATE AGENCY 48 HOURS BEFORE MOVING ON LOCATION.

PERTINENT WELL HISTORY: SN @ 8032' (recompleted in May 2012)

#### **PROCEDURE**

Note: Approx. 150 SXS Class "G" cement needed for procedure & (2) 4.5" CIBP Note: GYRO ON RECORD. (A GPS READING WILL NEED TO BE TAKEN AT THE WELL SITE AND RECORDED IN OPENWELLS. PLEASE TAKE IT TO THE 6TH DECIMAL PLACE).

- 1. MIRU. KILL WELL AS NEEDED. ND WH, NU AND TEST BOPE.
- 2. POOH W/ TBG & L/D SAME. RU WIRELINE AND MAKE A GAUGE RING RUN TO CHECK FOR FILL PER FOREMAN DISCRETION.
- 3. ISOLATE MESAVERDE PERFORATIONS (> 6536'): RIH ON WIRELINE W/ 4.5" CIBP. SET @  $\sim$ 6536'. RELEASE CIBP.
- 4. ISOLATE PERFORATIONS (8369'-5242'): RIH ON WIRELINE OR TUBING W/ 4.5" CIBP. SET @  $\sim$ 5192', (50' above top perf at 5242'). RELEASE CIBP, PUH 10', CIRC ENTIRE HOLE W/ TREATED FRESH WATER AND PRESSURE TEST CASING. SET A 105FT BALANCED CMT PLUG F/ 5192' to 5087'(8 SXS, 9.16 FT3, 1.64 BBLS).
- 5. PROTECT WASATCH TOP (4139') & BMSW (3650'): PUH WITH TUBING AND PUMP A MINIMUM OF (590FT) CMT F/ 4139' to 3549' (45 SXS, 51.53 FT3, 9.17 BBLS).
- 6. PROTECT PARACHUTE BASE (2534') & SURFACE CASING SHOE (2119'): PUH WITH TUBING AND PUMP A MINIMUM OF (577FT) CMT F/ 2640' to 2063' (44 SXS, 50.38 FT3, 8.97 BBLS).
- 7. PROTECT GREEN RIVER (902'): PUH WITH TUBING AND PUMP A MINIMUM OF (210FT) CMT F/ 1007' to 797' (16 SXS, 18.32 FT3, 3.27 BBLS).
- 8. PROTECT SURFACE (101'): PUH WITH TUBING AND PUMP A MINIMUM OF (105 FT) CMT F/ 105'-0' (8 SXS, 9.16 FT3, 1.64 BBLS). POOH AND RUN 1 INCH TUBING DOWN THE PRODUCTION/SURFACE CASING ANNULUS TO AS DEEP AS POSSIBLE AND CEMENT TO SURFACE (29 SXS, 33.21 FT3, 5.92 BBLS).
- 9. CUT OFF WELLHEAD AND INSTALL MARKER PER REGULATIONS.
- 10. RDMO. TURN OVER TO OPERATIONS FOR SURFACE REHAB. SURFACE RECLAMATION TO BE PERFORMED IN ACCORDANCE TO REGULATIONS.

# NBU 1022-1301CS

Total SXS: 150, Total CIBP: 2

<- Plug for Surface from 0' to 103' with 37SXS,103ft.



<- Plug for GreenRiver at 902' from 1007' to 797' with 16SXS,210ft.

<- Mahogany at 1730'

- <- Surface Shoe at 2119'
- <- Plug for Parachute Base & Surface Shoe from 2640 to 2063' with 44SXS,577ft.
- <- Parachute Base at 2534'
- <- BMSW at 3650
- <- Plug for Wasatch & BMSW from 4139' to 3550' with 45SXS,590ft.
- <- Wasatch at 4139'
- <- Plug above CIBP at 5192' from 5192' to 5087' with 8SXS,105ft. <-CIBP Above Perfs at 5192'
- <-Top Perf at 5242'

<-CIBP for Mesaverde at 6536'

- <-PBTD at 8519'
- <- Production Casing Shoe at 8547'
- <-TD at 8560'